IMPROVING DATA FOR DECISION-MAKING

A TOOLKIT FOR CERVICAL CANCER PREVENTION AND CONTROL PROGRAMMES

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ABBREVIATIONS AND ACRONYMS

AIDS	acquired immune deficiency syndrome
API	application programming interfaces
ART	antiretroviral therapy
BCC	behaviour change communication
CDC	The United States Centers for Disease Control and Prevention
CDSS	Clinical Decision Support System
CHW	community health worker
CITI	Collaborative Institutional Training Initiative
CKC	cold knife conization
DEFT	sample design effect
DHS	Demographic Health Survey
DQA	data quality assessment
DQR	data quality review
EQA	external quality assessment
EMR	electronic medical record
GAVI	The Global Alliance for Vaccines and Immunisation
GICR	Global Initiative for Cancer Registry Development
HIS	health information system
HIV	human immunodeficiency virus
HMIS	health management information system
HPV	human papillomavirus
IARC	International Agency for Research on Cancer
ICT	information and communication technology
IDCCP	Improving Data for Decision-making in global Cervical Cancer Programmes
IEC	information, education and communication
IPC	infection prevention and control
ITU	International Telecommunication Union
LBC	liquid-based cytology
LEEP	loop electrosurgical excision procedure
LMIC	low- and middle-income country
MoH	Ministry of Health
M&E	monitoring and evaluation
NCDs	noncommunicable diseases
NGO	nongovernmental organization
PITC	provider-initiated testing and counselling
RAP	rapid assessment process
SARA	Service Availability and Readiness Assessment
SOP	standard operating procedure
SPA	service provision assessment
STEPS	The WHO Stepwise Approach to Surveillance
STI	sexually transmitted infection
SVA	single visit approach
SWOT	strengths, weaknesses, opportunities, and threats
PCL	precancerous lesions
VIA	visual inspection with acetic acid
WHO	World Health Organization

GLOSSARY

TERM	ORIGINAL DEFINITION
Annualization	Division of total costs by life expectancy of the good, used to estimate the cost of a capital good over its lifetime.
Application Programming Interface (API)	A set of routines, protocols, and tools for building software applications which describes the way one piece of software asks another programme to perform a service.
Capital costs	The cost of goods that last for longer than one year such as equipment, vehicles and buildings.
Catchment area	The geographic area from which a facility's clients are drawn.
Catchment population	The population served by a particular facility.
Cervical cancer prevention and control programme	A cervical cancer prevention and control programme comprises an organized set of activities aimed at preventing and reducing morbidity and mortality from cervical cancer. The programme provides a plan of action with details on what work is to be done, by whom and when, as well as information about what means or resources will be used to implement the programme. The achievement of the programme is assessed periodically using a set of measureable indicators. A comprehensive programme includes the principal evidence-based interventions needed to reduce the high and unequal burden imposed on women and health systems in less developed countries by cervical cancer.
Change management	A process-focused approach to the management of organizational change and the transition involved in a re-directing of resources.
Colposcopy	The examination of the cervix, vagina and vulva with an instrument that provides strong light and magnifies a field, allowing specific patterns in the epithelial (surface) layer and surrounding blood vessels to be examined.
Cold knife conization	The removal of a cone-shaped area from the cervix, including portions of the outer (ectocervix) and inner cervix (endocervix), usually carried out in a hospital; the amount of tissue removed will depend on the size of the lesion and the likelihood of finding invasive cancer.
Cost-effectiveness analysis	Describes an activity or procedure that produces an adequate beneficial effect on a disease or condition in relation to its cost (in money, equipment, or time).
Coverage	The proportion of all targeted persons who attend a given service in a specified time.
Cryotherapy	By applying a highly cooled metal disc (cryoprobe) to the cervix and freezing the abnormal areas (along with normal areas) covered by it, cryotherapy eliminates precancerous areas on the cervix by freezing (i.e. it is an ablative method).
Cytotechnologist	Cytopathologist/cytotechnician/cytologist: persons trained in the microscopic examination of smears for the presence or absence of abnormal cells.
Data accuracy	Data objects must accurately represent the real world values they are expected to model. Accuracy problems may include: males reported as receiving cervical cancer screening; a test that is not for cervical cancer included in cervical cancer test data; number of people reported as receiving screening is greater than the eligible number, etc.
Data aggregation	The process of combining data into useful information aligned with indicators.
Data completeness	All requisite cervical cancer data points must be available (i.e. not missing), and the available data must be in a usable state.
Data conformity	The cervical cancer data must adhere to a predefined format. How to format relevant indicators and monitoring and evaluation data must be determined first, then how well the data received from the facilities and sites conform to the predefined format.
Data consistency	Data must be consistent across different datasets, systems, institutions, etc.
Data duplication	Multiple unnecessary representations of the same data objects within a dataset (i.e. double counting). It also includes the inability to maintain a single representation for each entity across your systems (i.e. same data being collected multiple times).
Data element	The smallest unit of a type of information that has a unique meaning and distinct units or values.
Data integrity	Ability to link data records across the system so that data remain the same when stored, retrieved and processed. The opposite of data integrity is data corruption.
Data timeliness	Data must be collected and made accessible in a timely manner.
Decision support systems	Provide intelligently filtered and presented knowledge and information at appropriate time to enhance quality and performance of system and providers. Include client alerts or reminders, checklists, medical guides, stock levels, deviations, etc.
Depreciation	Amount of capital used during one fiscal year.
Discounting	Accounts for time preference through calculating the present value using the discount rate.
Economic costs	Estimates all costs of an intervention, regardless of the source of funding. The opportunity cost of all resources is accounted for in the analysis, including in-kind and donor contributions.
eHealth	Health-care practices supported by electronic and digital processes and communication.
Electronic system	A system with the ability to have information stored, searched, accessed, analysed, and reported electronically. Not paper-based.
Endocervical curettage (ECC)	Some surface cells are gently scraped from the endocervical canal with a special thin instrument or spatula; this is a simple procedure that takes just a few minutes.

Table continued

Epidemiology	Epidemiology is the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems.
Evaluation	The systematic and objective assessment of the relevance, adequacy, progress, efficiency, effectiveness and impact of a course of actions, in relation to objectives and taking into account the resources and facilities that have been deployed.
Financial costs	Estimate the actual monetary flows of the buyer, such as the Ministry of Health. Do not include the value of resources already paid for such as personnel time and donated goods.
Guidance	Information provided to stakeholders regarding how tools are intended to be used and how they may be adapted to meet the needs of a given programme.
Guideline	A recommended, standardized plan that provides direction to operationalize policy or strategy.
Health information exchange systems	Systems in place that can mobilize health-care information electronically across organizations within a region, community, or hospital system.
Health management information system	An electronic system that captures, compiles, and aggregates data on health care services; the data can be used to create dashboards.
Health policy	Decisions, plans, and actions undertaken to achieve specific health-care targets in a society.
HL7	Health Level-7, set of international standards for the transfer of clinical and administrative data between hospital information systems.
Histology	The study of the microscopic structure of tissues; a histological examination uses thin slices of stained tissue to determine the presence or absence of disease.
Histopathology	The study of changes in tissues caused by disease; a histopathological examination uses the same methods as a histological examination, but is performed on biopsied samples of abnormal tissue.
Horizontal integration of data	Ability of systems at the same level to share or aggregate data easily between each other and give a complete picture of the client. For example, the ability to share data between client level systems, such as electronic health records, pharmacy dispensing, and laboratory systems.
Human papillomavirus (HPV)	Human papillomavirus (HPV) is the most common sexually-transmitted infection (STI). Cervical cancer is caused by high-risk types of HPV; the two high-risk HPV types that most commonly cause cervical cancer are types 16 and 18, which together are responsible for approximately 70% of cervical cancer cases in all countries worldwide.
HPV Test	DNA or serology test to determine active HPV infection.
Indicator	A variable that measures one aspect of a programme that is directly linked to the programme's objectives; markers that help measure change by showing progress toward objectives.
Infrastructure	The items required to support provision of quality services in the designated cervical cancer screening and treatment services at the facility (e.g. handwashing area, washroom, physical layout of the facility, examination room, and communication equipment).
Interview probe	Follow-up questions used as a technique in interviewing technique to prompt the respondent for more information, or to provide the respondent with the context needed to accurately answer the survey question.
Introduction costs	One-time programmatic activities. These include microplanning, initial training activities, and initial sensitization/IEC. These are treated as capital costs in economic costing.
Invasive cancer	Cancerous tumours that have broken out of the lobule where they began growing and have the potential to invade other parts of the body.
Investment costs	Initial expenditures used in preparation for an intervention. These include introduction costs plus purchase of capital goods, such as cryotherapy and LEEP machines and transport purchases.
Loop Electrosurgical Excision Procedure (LEEP)	The removal of abnormal areas from the cervix and the entire transformation zone, using a loop made of thin wire powered by an electrosurgical unit; the loop tool cuts and coagulates at the same time; this is followed by use of a ball electrode to complete the coagulation.
Legacy systems	Historical data system that predates the current system.
Lugol's iodine	Iodine applied to the vagina and cervix to determine the presence of suspicious lesions.
Management software	Computer programmes that have the capacity to help plan, organize, and manage resources and develop estimates.
mHealth	Mobile-health, the practice of medical and public health supported by mobile devices.
Monitoring	The continuous oversight of an activity to assist in its supervision and to see that it proceeds according to plan; it involves the specification of methods to measure activity, use of resources, and response to services against agreed criteria.
Open-source software	A computer programme that allows the user to change and distribute it to anyone for any purpose.
Opportunity costs	Financial costs incurred from taking one action over another.
Palliative care	A multidisciplinary approach to specialized medical care for people with serious illnesses, focusing on providing patients with relief from symptoms, pain, physical stress, and mental stress to improve quality of life for both the patient and the patient's family.
Pap smear	Papanicolaou test, carried out to evaluate the presence of abnormal cervical cells.
Pathology	The study of disease and its effect on body tissue.
Patient and programme monitoring	A systematic means of capturing client-level data, analysing it with appropriate aggregation and reporting tools, and using the resulting information to make strategic choices regarding programme management.
Performance standard	A statement that defines, in the clearest, most objective terms, the agreed-upon level of performance for a specific service, based on best evidence and best practices. It states what the health-care service is expected to deliver.

Table continued

Point of care diagnostics	Medical testing at or near the site of patient care.
Policy	Decisions, plans, and actions undertaken to achieve specific health-care targets in a society.
Post-treatment follow-up screening	A visit which uses a screening test to determine the success of a previous treatment for precancerous lesions.
Precancerous lesion	Non-invasive lesion with a predictable likelihood of becoming malignant.
Prerequisite infrastructure	Pre-existing equipment that does not need to be costed in an incremental analysis.
Present value	The current value of goods or services, usually applied to costs or outcomes expected in the future.
Primary prevention of cervical cancer	Actions to avoid exposure to the principal causes of a disease; in the case of cervical cancer, prevention of HPV infection.
Proprietary information source	Software that is licensed with exclusive rights to the developer that can limit modification, analysis, access, and sharing with others.
Quality assurance	Overall management plan (the "system") that guarantees the provision for high-quality service.
Quality control	The application of a series of measurements (the "tools") used to assess the quality of the services and facilities.
Quality improvement	The structured approach to analyse performance and apply systematic efforts for improvement.
Radiation physics	Invisible rays (high-energy radiation) are beamed onto the cancerous cells and the surrounding affected areas; the rays penetrate the tissue, destroying the cancerous cells, so that the cancer is fully or partially eliminated; the destroyed cancer cells are eliminated from the body.
Radiation technologist	Non-medical, trained staff member who operates the radiation machines used to deliver radiation-based cancer treatment.
Radical hysterectomy	Surgical removal of the entire uterus, cervix, tissue on the side of the uterus including the fallopian tubes and ligaments; nodes and ovaries may also be removed.
Real-time	Information that is obtained at the same time the inquiry is initiated.
Recurrent costs	The costs of goods used in the delivery of a service or intervention that last less than a year, e.g. personnel salaries.
Rescreening	A screening visit attended by a woman after a previous negative result on a screening test. This visit is part of routine preventive care and should be conducted within the recommend interval for screening.
Screening	A public health intervention provided to an asymptomatic target population; it is not undertaken to diagnose a disease, but to identify individuals with increased probability of having either the disease itself or a precursor of the disease.
Secondary prevention of cervical cancer	A level of preventive medicine that focuses on early diagnosis, use of referral services, and rapid initiation of treatment to stop the progress of disease processes or of a disability.
Service availability	The physical presence of facilities or mobile clinics that are providing cervical cancer screening and treatment services.
Service utilization	The key indicator benchmarks that the facility is tracking (e.g. the number of monthly screenings and treatment rate of precancerous lesions identified).
Simple hysterectomy	Surgery to remove only the uterus and the cervix alone.
Standard	An agreed-upon level of performance desired for a specific service that is consistent with evidence-based practice and national and international guidelines, against which performance can be measured to improve and ensure quality.
Straight-line depreciation	This type of depreciation assumes that all benefit from a capital good depreciates evenly throughout its lifetime. It involves annualizing the total costs but not discounting.
Supportive supervision	A process of supporting, strengthening, and encouraging health personnel to improve their performance to provide quality services. It involves a structured approach to identifying gaps and applying systematic efforts to improve service provision with tracking of results.
SWOT analysis	Structured framework for analysing the internal strengths and weaknesses of an organization, project or programme, and its external opportunities and threats.
Target population	A group of people identified as intended clients for a particular health-care service; in this case, the population of women targeted for cervical cancer prevention and control programmes.
Telemedicine consultation	Using electronic communication (e.g. phone, video conference, email) to obtain the expert medical opinion or consensus necessary for diagnosis or decision making when in-person consultation is difficult to provide.
Time preference	Preference for receiving goods and services at one time over another, usually expressed as wanting goods and services now, rather than in the future.
Time-delayed	Information that is obtained after the inquiry has been initiated, usually more than 24 hours after the inquiry.
Treatment of invasive cervical cancer	Includes chemotherapy, radiation, and radical hysterectomy.
Treatment of precancerous lesions	Includes cryotherapy, LEEP, conization, and in some situations, simple hysterectomy.
Triage	Step or procedure typically performed between the screening and diagnosis or treatment procedures to further stratify individuals with positive primary screening results. [Solomon, 2003].
Vertical integration of data	Whether information flows upwards and downwards through the systems (i.e. from facilities to subnational levels to national levels, or vice versa).
VIA	Visual inspection of the cervix with the application of 3–5% acetic acid.
VILI	Visual inspection of the cervix with the application of Lugol's iodine.

INTRODUCTION TO THE TOOLKIT

CERVICAL CANCER IN LOW- AND MIDDLE-INCOME COUNTRIES

Cervical cancer in low- and middle-income countries (LMICs) accounted for approximately 85% of the 528 000 new cases diagnosed globally in 2012. In the same year, approximately 87% of the 266 000 deaths from cervical cancer worldwide occurred in LMICs [Globocan, 2012]. These statistics clearly illustrate the disproportionately heavy burden of cervical cancer faced by communities, families, and women in less developed regions. Women living in LMICs who are at highest risk are typically aged between 30 and 49 years. The tragedy of death or illness due to cervical cancer during what should be some of the most productive years in a women's life is compounded by the knowledge that most cases are both preventable and treatable when identified early [WHO, 2014].

Key drivers of the disparate burden are the numerous challenges encountered in the development and implementation of effective and sustainable strategies for cervical cancer prevention and control. Lack of policies and programmes for cervical cancer; lack of timely and reliable data; lack of resources; and lack of coordination are all common barriers to comprehensive cervical cancer prevention and control in LMICs. In addition to the impact of these barriers on availability and accessibility of preventive services, women in LMICs frequently must contend with gender bias and cultural and societal norms which further restrict their ability to access services and make decisions about their health. Projections warn that without urgent attention, incidence of cervical cancer can be expected to rise by almost 25% in the next 10 years [Globocan, 2012].

PURPOSE OF THE TOOLKIT

IMPROVING DATA FOR DECISION-MAKING

This toolkit aims to expand the support provided to LMICs in current global normative guidance through an aligned package of operational resources for improving the availability and use of high-quality data for decision-making in cervical cancer programmes. The standardized tools and guiding information provided are designed to be adapted to country and programmatic context in order to assist ministries of health and other stakeholders in generating the information necessary to better plan, implement, monitor, evaluate, and scale cervical cancer prevention and control programmes.

GLOBAL MONITORING

In 2013, the World Health Assembly identified cervical cancer as a priority intervention in its Global Action Plan for the Prevention and Control of NCDs 2013–2020. In order to support implementation and monitoring of the Global Action Plan, WHO Member States agreed upon the Global Monitoring Framework for Noncommunicable Diseases,[1] which highlights the importance of prevention and control of cervical cancer through the inclusion of an indicator to monitor screening on a global level. In addition, cervical cancer also finds a place within several of the targets of the United Nations Sustainable Development Goals,[2] specifically those related to the reduction of noncommunicable diseases worldwide (Goal 3) and the health of women and girls (Goal 5) [UN, 2016].

In alignment with such global initiatives, a secondary aim of this toolkit is to enable LMICs to more readily contribute to the global body of evidence surrounding noncommunicable diseases (NCDs), gender health equality, sexual and reproductive health, vaccination and other health areas where information on cervical cancer is highly relevant. Enhanced availability and quality of cervical cancer data from countries with the highest burden – and the most difficult challenges – provides global normative bodies, donor organizations, and international stakeholders with crucial opportunities for establishing and refining priorities, developing timely evidence-based guidance, and making critical funding decisions.

[1] See: http://www.who.int/nmh/global_monitoring_framework/en/

[2] See: http://www.un.org/sustainabledevelopment/

HOW TO USE THE TOOLKIT

Cervical cancer burden, prevention and control strategies and programme structure vary from country to country; therefore each section in the toolkit includes guiding information and suggestions on how to make adaptations while maintaining standardization over time and across countries. Careful adaptation will allow for appropriate planning and monitoring of national programmes, as well as high-quality global reporting. This toolkit is offered as a mechanism to strengthen data for decision making, and as such should not be considered required in part or as a whole.

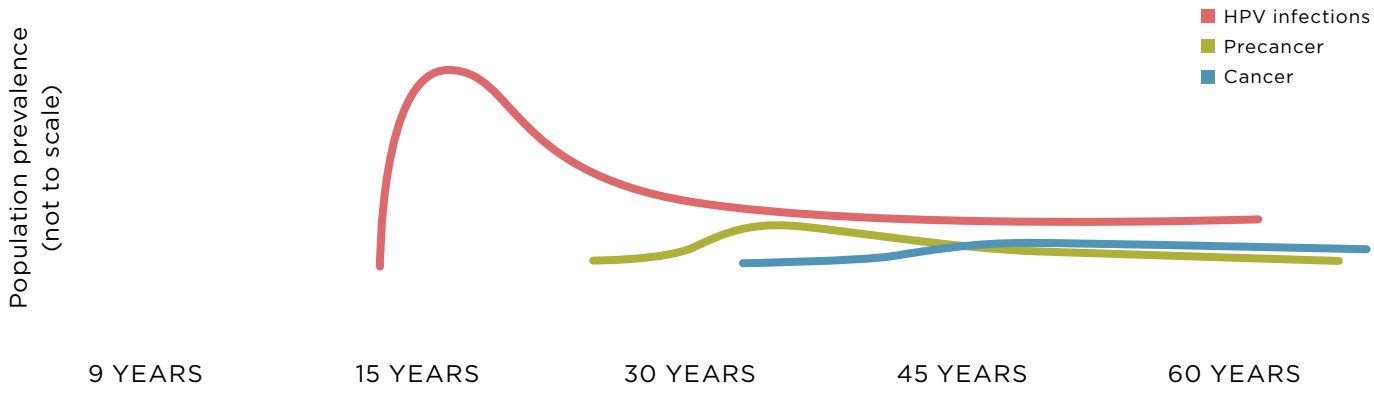
TOOLKIT SCOPE

This toolkit was developed primarily for ministries of health and their implementing partners, for the prevention, screening, and treatment programmes for cervical cancer. Key target audiences include programme managers, monitoring and evaluation staff, survey administrators, health administrators and economists. However, private-sector providers, civil society organizations, nongovernmental organizations, academic research groups, and other national and international stakeholders can all benefit from aligning and coordinating data practices.

Cervical cancer prevention and control programmes consist of a combination of activities that include primary prevention through human papillomavirus (HPV) vaccination; secondary prevention through screening and the treatment of precancerous lesions; tertiary prevention through treatment of invasive cancer; and palliative care (Figure 0.1). While the primary focus of this toolkit is secondary prevention, primary and tertiary prevention are discussed as needed to promote coordination across the continuum.

FIGURE 0.1

Overview of WHO recommended programmatic interventions over the life course to prevent HPV infection and cervical cancer [WHO, 2014]



PRIMARY PREVENTION	SECONDARY PREVENTION	TERTIARY PREVENTION
Girls 9-13 years • HPV vaccination **Girls and boys, as appropriate** • Health information and warnings about tobacco use* • Sexuality education tailored to age & culture • Condom promotion/provision for those engaged in sexual activity • Male circumcision	**Women >30 years of age** **Screening and treatment as needed** • "Screen and treat" with low cost technology VIA followed by cryotherapy • HPV testing for high risk HPV types (e.g. types 16, 18 and others)	**All Women as needed** **Treatment of of invasive cancer at any age** • Ablative surgery • Radiotherapy • Chemotherapy

* Tobacco use is an additional risk factor for cervical cancer

The toolkit includes components of comprehensive cervical cancer surveillance and monitoring systems; however it does not serve all strategic information needs. Data generated using the tools should be triangulated with data from cancer registries, longitudinal cohort studies, and research conducted by academic institutions, consortia, cancer networks, and others. As seen in Figure 0.2, the analysis and comparison of data from multiple sources, supports a strategic approach to strengthening policies, improving programmes and service quality, and maintaining high-quality information systems.

FIGURE 0.2
Cervical cancer strategic information continuum

Data Collection
- Periodic, population-based surveys
- Cancer registries
- Hospital-based databases
- Facility-based surveys
- Patient and programme monitoring
- Research by consortia and networks

Data Analysis and Synthesis
- Screening and treatment coverage
- Morbidity and mortality
- Capacity and readiness
- Programme performance

Decision-making
- Strategic planning
- Programme improvement
- Policy development
- Systems strengthening

Reduction in cervical cancer incidence, late-stage diagnosis, and death

TOOLKIT STRUCTURE AND CONTENT

The toolkit comprises the following five sections:

- **Section 1**: Rapid situational assessment of data and data systems
- **Section 2**: Population-based survey modules
- **Section 3**: Patient and programme monitoring
- **Section 4**: Facility-based surveys
- **Section 5**: Prevention and control costing – analysis and planning module for screening and treatment

Each section includes information outlining its purpose; instructions on how to administer all survey modules and data collection tools; and suggestions for adaptation when and where applicable. A package of tools (e.g. survey questionnaires, checklists, sample data collection forms, etc.), references and resources for the implementation of the presented practices and approaches are included at the end of each section.

While each section of the toolkit may be used individually, the sections were designed to complement each other. Throughout the toolkit, key points of complementarity – or "intersections" – between sections are highlighted. These intersections can be explored in order to streamline and/or leverage data collection efforts, inform programme planning, and strengthen monitoring and evaluation and surveillance systems by standardizing data across different programme aspects.

SECTION 1: RAPID SITUATIONAL ASSESSMENT OF DATA AND DATA SYSTEMS

Section 1 describes the situational assessment of data systems and the goal to contribute to the available evidence-base for planning and implementing national cervical cancer monitoring and evaluation, surveillance, and information systems. In support of this goal, the assessment aims to achieve the following objectives:

1. To identify strengths, challenges and gaps in programme implementation – as well as opportunities and threats relevant to cervical cancer data systems – through a survey documenting the country cervical cancer landscape.

2. To identify the strengths, weaknesses, opportunities and threats affecting cervical cancer data and data systems, through in-depth interviews with key personnel and desk review of key documents.

3. To use the findings of the landscape survey, in-depth interviews, and desk review to develop actionable recommendations for improving cervical cancer data and data systems.

The findings and recommendations can be used to inform strategic planning, and as tools to advocate for programme resources. Furthermore, the recommendations can help determine the applicability of the other sections in the toolkit and guide their use.

Information described within nine key domains is gathered using a mixed methods approach and involves: i) a structured survey questionnaire which collects information on country context and programme landscape and is completed by key personnel and supplemented by desk review as needed; and ii) semi-structured field interviews, observations, and desk review which collect further detailed information on data and data systems. Ongoing gap and SWOT (Strengths, Weaknesses, Opportunities, and Threats) analyses provide the foundation for the development of recommendations. It is important to note that this is a systematic approach to documenting and describing the existing situation in order to inform improvement, and not a scored performance evaluation or assessment.

The steps and processes presented in Section 1 should act as a core foundation and can be further adapted and expanded into standard operating procedures (SOPs), data collection tools, job aids and other practical materials for assessment implementation.

QUICK REFERENCE: CONTENTS OF SECTION 1

- Description of assessment process and tools;
- Assessment checklists outlining the roles, responsibilities, and steps for implementing each phase of the assessment; and
- Survey tools and instructions for collecting and analysing general information on cervical cancer programme landscape and context, and in-depth information on data systems relevant to cervical cancer.

SECTION 2: POPULATION-BASED SURVEY MODULES

Section 2 outlines the population-based survey modules developed to provide stakeholders with standardized questions on cervical cancer screening and treatment that can be incorporated into existing population-based surveys. The use of standardized questions helps to ensure that data collected are not only useful for programme planning and evaluation, but are comparable over time and across countries. The modules in this section assist LMICs in the surveillance of key aspects of cervical cancer prevention and control, including:

- Screening prevalence;
- Follow-up and treatment of precancer;
- Facilitators to screening; and,
- Barriers to screening and treatment.

QUICK REFERENCE: CONTENTS OF SECTION 2

- A core survey module including an introductory statement and a set of basic (core) survey questions;
- An expanded survey module that includes the introductory statement and core and core plus questions;
- Instructions for calculating indicators and administering the introductory statement, and all reference images and questions;
- Methodological considerations for incorporating cervical cancer questions into existing population-based surveys; and
- Recommendations on the inclusion of HPV testing in population-based surveys; and
- Example table shells to illustrate analyses.

SECTION 3: PATIENT AND PROGRAMME MONITORING

Section 3 outlines a process for the routine collection, aggregation, analysis, and reporting of data for cervical cancer secondary prevention (screening and precancerous lesion treatment) programmes. Guiding information in this section supports the development of standardized indicators and data practices, and the use of data to improve programme responsiveness and effectiveness.

This section provides resources to assist health care providers, facility managers, subnational and national Ministry staff and their partners to collect, systematically analyse and use data to:

- Better plan, target, tailor, and scale interventions;
- Assess whether programmes are being implemented with quality;
- Respond effectively when they are not implemented as planned; and,
- Report on standardized global indicators.

The tools and guiding information focus primarily on the secondary prevention portion of the continuum (screening and treatment of precancerous lesions) and do not extend past monitoring mechanisms and feedback processes related to invasive cervical cancer referrals.

QUICK REFERENCE: CONTENTS OF SECTION 3

- Roles and responsibilities for cervical cancer M&E;
- A set of core and optional indicators for global, national, subnational, and facility levels;
- A set of minimum (and additional optional), data elements for client level data collection;
- A set of minimum (and additional optional) data elements for facility registers;
- Example forms for collecting and collating individual client data, and summarizing and reporting monthly and annual facility data; and
- Descriptions and examples of data visualization tools, including a sample DHIS2 cervical cancer module dashboard.

SECTION 4: FACILITY-BASED SURVEYS

Section 4 provides Ministry decision-makers, implementing partners, facility administrators, and service providers with the tools to gather and evaluate accurate, up-to-date information on the availability of cervical cancer secondary prevention services, the readiness and capacity to deliver services, and the quality of the services being delivered.

The section is structured to be user-friendly and easy to understand, with instructions for each tool. Guiding information supports the purpose-driven use of individual tools, as well as the use of the full package of resources as part of a comprehensive approach to monitoring and surveillance of cervical cancer service availability, readiness, and quality.

QUICK REFERENCE: CONTENTS OF SECTION 4

- Instructions and materials for planning and conducting supportive supervision for secondary prevention service provision;
- Instructions and supplementary materials for conducting a standalone facility readiness assessment using a portion of the supportive supervision tool;
- Considerations and suggested methods and tools for analysing and interpreting service availability, readiness and performance information at the national (or other aggregate) level.

SECTION 5: PREVENTION AND CONTROL COSTING – ANALYSIS AND PLANNING MODULE FOR SCREENING AND TREATMENT

Policy-makers and programme managers need information on the projected costs of introducing cervical cancer interventions in order to make decisions on the "when", "where", and "what" of service introduction and scale-up. Through a facilitated process, an Excel-based tool allows health programme planners and managers to estimate, synthesize and analyse programme and service costs, including:

- Early detection of cervical cancer;
- Diagnosis;
- Treatment of precancerous lesions and invasive cancer;
- Palliative care for advanced disease;
- Community outreach and sensitization;
- Programme planning, monitoring and evaluation; and
- Supportive supervision.

Section 5 is intended primarily as a reference manual for trained facilitators. National Ministry programme planners, managers and implementers can use it to gain an understanding of the Excel-based C4P-ST tool[1] inputs and associated costing and planning process in order to align existing processes or determine the need for the facilitated C4P-ST process. This robust tool and interactive process enables programmes to:

- Estimate service costs and service coverage based on country-specific data and needs;
- Estimate financial and economic costs, and start up and recurrent costs of cervical cancer programmes;
- Estimate service coverage rates based on cost, distribution, population need and predicted scale-up; and
- Explore cost/service access trade-offs based on different models of public service delivery.

QUICK REFERENCE: CONTENTS OF SECTION 5

- Guiding information directed at the trained facilitator:
  - Instructions for tool use, including information on software requirements
  - Guiding information for conducting meetings with the planning and costing team and other in-country stakeholders
- Guiding information directed at the in-country planning and costing team:
  - Outline of the cost categories and the service outputs
  - List of required data elements to guide data collection

[1] The C4P-ST Excel-based tool and further information regarding facilitator support are available on request from: ncdsurveillance@who.int.

SECTION 1

RAPID SITUATIONAL ASSESSMENT OF DATA AND DATA SYSTEMS

INTRODUCTION

Existing systems to routinely collect cervical cancer patient and programme information in low- and middle-income countries (LMICs) often face substantial challenges, including a lack of standards, tools, human resources, and other vital inputs and processes. In many cases the absence of timely population, surveillance, and cost data further hinders the ability of programme implementers to make critical decisions and plan strategically for future goals. The often complex landscape of cervical cancer prevention and control service delivery in LMICs presents additional barriers to collecting the information needed to:

- Track patients through the continuum of care;
- Monitor programme implementation;
- Evaluate individual and population level outcomes; and,
- Track the distribution and allocation of resources.

The tools and guiding information in this section provide a systematic approach for identifying the opportunities and challenges in implementing and strengthening cervical cancer data systems, and for generating actionable recommendations aimed at improving the availability of high-quality data for decision-making. Through documentation and analysis of country context and data systems and practices relevant to cervical cancer, the rapid situational assessment contributes to the evidence-base available to inform strategies for strengthening.

The primary focus of this assessment is secondary prevention (i.e. cervical cancer screening and precancerous lesion treatment); however, given the cross-cutting nature of health information, and the best practice of leverage existing systems and processes, information is gathered across the continuum of cervical cancer care. Primary prevention (HPV vaccination) and tertiary prevention and care (invasive cervical cancer treatment and management) are therefore addressed as components in the landscape of programmes and services, and the data and data systems they employ are assessed in a limited manner.

Optimal implementation of this assessment relies on the primary assumption that cervical cancer screening, precancerous lesion treatment, diagnostics, and invasive cervical cancer treatment and management services are being provided in some manner. Services may be provided only at certain levels of the health-care system, or only outside of the public or government health-care system. Services may be provided irregularly in an opportunistic fashion, or may be part of an organized cervical cancer prevention and control or women's health programme.

In the rare cases where no cervical cancer prevention and control services are being provided, the in-depth portion of this assessment can be adapted to focus solely on general health information systems' (HIS) processes and practices which could potentially be leveraged for cervical cancer.

DATA SYSTEMS ASSESSMENT PROCESS

OBJECTIVES AND SCOPE

The overall goal of the data systems situational assessment is to contribute to the available evidence-base for planning and implementing national cervical cancer monitoring and evaluation (M&E), surveillance, and information systems. In support of this goal the assessment aims to achieve the following objectives:

1. To identify strengths, challenges and gaps in programme implementation, as well as opportunities and threats relevant to cervical cancer data systems through a survey to document the country cervical cancer landscape.

2. To identify strengths, weaknesses, opportunities and threats effecting data and data systems relevant to cervical cancer through in-depth interviews with key personnel, direct observation, and desk review of key documents.

3. To use the analysis of combined assessment findings to develop actionable recommendations for improving cervical cancer data and data systems.

The resulting list of recommendations can be used to inform strategic planning, and as a tool to advocate for programme resources. Additionally, the recommendations assist in determining applicability of the other sections in this toolkit and guide their use. For example, the sample recommendations presented later in this section, highlight a need for nationally standardized data collection tools – a need that can be filled by the tools and guiding information set out in Section 3 of this toolkit, Patient and Programme Monitoring.

This assessment is not a scored performance evaluation or assessment, nor are its findings intended to generate statistically significant or more broadly representative conclusions. This is strictly a systematic approach to documenting and describing the existing situation in order to inform improvement. Such a targeted purpose is highly conducive to the use of a rapid situational assessment approach, affording the following benefits:

1. The cost-effective approach is feasible in low-resource settings;

2. The limited time commitment optimizes personnel engagement;

3. Rapid availability of findings allows for immediate responses to priority needs; and

4. The use of participatory techniques for data collection and validation ensure incorporation of institutional knowledge, and supports ownership of the findings and recommendations.

TIMELINE

Information is gathered by an assessment team during two phases of data collection, using a mixed methods approach and employing participatory techniques to gather expanded detail. The first phase of data collection and analysis is completed over a period of 3-4 weeks; the second phase is completed over 2 weeks. An additional 3–4 weeks should be allotted for report writing following the close of the assessment.

SAMPLING

The sampling of respondents for the assessment is purposive, focusing on Ministry or partner personnel who have in-depth knowledge of one or more of the domains and themes. Initial key contacts are identified during Phase 1, and additional respondents are identified through referrals (i.e. snowball sampling) during Phase 2.

Patients or service clients should not be considered respondents for any portion of this assessment.

THE RAPID ASSESSMENT PROCESS TEAM

The Rapid Assessment Process (RAP) team is responsible for all data collection and analysis. Team members should be selected by the assessment lead for their expertise in data systems, M&E, surveillance and informatics; or cervical

cancer programmes and clinical service provision. Ideally, all team members will have previous experience with qualitative data collection and analysis.

RAP team composition may vary based on the context of implementation; however, at least five to six team members are recommended in order to adhere to timeline:

1. Embedded RAP team member (1–2 persons)

   - Where the assessment is implemented by a team outside of the national government Health Department or Ministry – or outside of the country – at least one member of the team must be sourced from inside the Ministry or their implementing partner

2. Data Systems, M&E, and Informatics Specialists (3 persons)

   - One of these specialists will be designated as the RAP team lead

3. Clinical Content Specialist (1 person)

Details on the specific responsibilities for each role can be found in the Roles and Responsibilities Checklists at the end of this section. These checklists are intended to provide the basic assessment roles and responsibilities and can be used as general planning documents, to develop terms of reference for RAP team members, or to ensure all responsibilities are considered when adapting the assessment approach.

PHASE 1 OF THE ASSESSMENT

SPECIFIC OBJECTIVES

- To collect data/responses using a structured landscape survey questionnaire tool
- To identify preliminary programme strengths and weaknesses, and external opportunities and threats that may impact implementation of high-quality data systems for cervical cancer
- To analyse preliminary findings to inform and guide Phase 2 data collection
- To identify key persons to act as respondents for Phase 2 in-depth interviews
- To identify programmes and partners with exemplary monitoring and evaluation, surveillance, or information systems that can potentially be leveraged

DATA COLLECTION

Phase 1 data collection is guided by the structured Landscape Survey Questionnaire, with responses provided directly by key personnel, supplemented by a desk review of policies, strategies, reports, guidelines and other documents.

IDENTIFYING KEY CONTACTS

There are two objectives for the identification of key contacts during Phase 1:

1. To obtain data and responses for the Landscape Survey Questionnaire
2. To identify respondents for the Phase 2 interviews

Contacts can be Ministry or national level programme personnel, district level health personnel, health-care providers, partners, etc. or anyone with the most comprehensive and accessible knowledge for the target domains and themes of Phase 1 and 2 data collection tools.

The same contact may have knowledge applicable to more than one domain or content area, therefore it is important – in both Phase 1 and Phase 2 – to cross-reference other domains in order to consolidate relevant questions for each respondent.

During Phase 1 the names, titles, and sufficient reliable contact information (e.g. phone, email, office location) for key personnel should be collected in a document or spreadsheet as designated by the assessment lead. Fields for noting specific relevant survey and interview questions, service areas (e.g. screening, treatment, etc.) and secondary survey or interview domains or themes for which a key contact has been listed can also be included to better prepare for interview scheduling, and to assist with cross-referencing between the assessment tools.

Patients/clients are not eligible to be considered contacts or respondents at any point in this assessment.

IDENTIFYING EXEMPLAR PROGRAMMES

In the context of this assessment, an exemplar programme or facility is one with a functioning high-quality system (paper-based or electronic) for patient or facility level data collection; monitoring and evaluation; surveillance; and data management and use. The programme may be fully governed by a government ministry, or may be governed in part or in whole by an implementing partner external to the Ministry.

If an exemplar programme or facility is identified during Phase 1, the RAP team will conduct a programme- or facility-specific interview during Phase 2 in order to document best practices, and to identify

potential opportunities for leveraging existing data systems and lessons learned.

STAKEHOLDER INBRIEF

The stakeholder inbrief may be planned for prior to the start of Phase 1 data collection, or prior to the more participatory Phase 2 data collection. The objective is to introduce the assessment objectives and methods, define expectations, and ensure engagement of key ministry and programme personnel and other relevant stakeholders and key contacts.

Where the assessment is conducted by a team unfamiliar with the country cervical cancer landscape, the inbrief is an opportunity for key ministry and programme personnel to provide informational presentations on current cervical cancer screening programming and services, health information systems, procurement mechanisms, and laboratory structures and services.

PHASE 2 OF THE ASSESSMENT

SPECIFIC OBJECTIVES

- To conduct in-depth interviews in order to obtain the detailed information outlined in the Discussion Guide
- To verify and expand preliminary programme strengths and weaknesses, and external opportunities and threats and identify additional SWOT specific to data and data systems
- To monitor information saturation and iteratively refine discussion guides based on gaps
- To identify additional key persons to act as interview respondents as needed to validate existing responses and achieve saturation
- To obtain detailed information on programmes and partners with exemplary monitoring and evaluation, surveillance, or information systems in order to identify systems and lessons learned that could potentially be leveraged
- To finalize SWOT analysis and use it to inform the development of specific, actionable recommendations for strengthening cervical cancer data and data systems
- To validate findings and recommendations, and foster initial development of an action plan to address recommendations through a participatory assessment out-brief with key stakeholders and decision-makers

DATA COLLECTION

Phase 2 data collection is guided by the in-depth Discussion Guide included in the Implementation Tools and Materials package at the end of this section.

Responses are provided directly by key personnel through interviews, supplemented by direct observations of data systems and practices and a desk review of policies, strategies, reports, guidelines and other documents. A separate sample exemplar programme discussion guide has also been included to guide the programme- or facility-specific interviews with any exemplar programmes identified during Phase 1.

STAKEHOLDER DEBRIEF

Phase 2 data collection, and the assessment as a whole, culminates in a debrief session with ministry and programme personnel, and other key stakeholders. The objectives of this meeting are:

1. To present the RAP teams' findings and recommendations;
2. To have the refined SWOT analysis results and preliminary recommendations validated by those with the most situational knowledge;
3. To make immediate adjustments based on feedback, and flag other revisions to be completed during report drafting; and
4. To begin discussions concerning an action plan for addressing the validated recommendations.

It is ideal to have all stakeholders – including ministry and programme decision-makers – present at one joint debrief to ensure collective discussion and buy-in for next steps.

The RAP team lead will be responsible for facilitating the meeting, ensuring that each analysis and recommendation is reviewed, and feedback is solicited and documented.

DATA ANALYSIS

The rapid situational assessment approach utilizes a basic iterative Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis as the primary method of analysis:

- Strengths and Weaknesses – internal programme factors such as core competencies and capabilities, management and operations, organizational structure

and culture, capacity, programme strategies and plans, data management and use structures and processes

- Opportunities and Threats – external uncontrollable factors such as political will, resource allocation, general health infrastructure and health system capacity, partner programmes, information and communication technology (ICT) infrastructure and human resources capacity, existing national HIS and system architecture, national policy and priorities.

The factors identified in the SWOT analysis form the basis of the actionable recommendations aimed at improving the availability of high-quality data for decision-making. In line with a change management approach to improving systems, the recommendations are categorized by the core element which requires action: Policy, Process, People, and Technology. To aid in strategic planning, the recommendations can be prioritized and further categorized into time-bound groups based on urgency of need and feasibility for addressing (informed by SWOT): Short-term Recommendations (addressed within 1 year); Intermediate-term Recommendations (addressed within 2–5 years); and Long-term Recommendations (beyond 5 years to address).

In addition to the SWOT analysis, ongoing monitoring of the frequency of encountering new information (i.e. saturation monitoring) is key during the less structured Phase 2 data collection. Regular review and synthesis of information is required to determine where gaps or needs for validation remain.

DATA MANAGEMENT AND PROTECTION

Methods or platforms for data collection and management must be determined by the assessment lead based on implementation context. Electronic data capture is suggested – and is strongly recommended for Phase 2 – in order to best facilitate analysis of such a large amount of information. Data confidentiality measures should be clearly established and monitored throughout the assessment.

POST-ASSESSMENT

ASSESSMENT REPORT WRITING AND DISSEMINATION

Validated refined SWOT analyses and preliminary recommendations, and any other feedback obtained should be incorporated prior to finalization of analyses and recommendations and report writing. The format and content for the report will follow that outlined prior to the start of the assessment through conversations between the assessment lead and collaborators. Once the report is drafted, it will be circulated to those in attendance at the debrief for review and feedback prior to dissemination.

ETHICAL CONSIDERATIONS

There is very little risk associated with the type of data being collected in this assessment; however, it is still vital to ensure that all respondents have a clear understanding of the assessment and what will be done with any information they provide. Participation as a respondent must be voluntary, and respondents should feel free to decline to provide any responses which make them uncomfortable. Informed consent and ethical approval requirements specific to the country or organizational context must be understood and adhered to. Where no requirements are in place, it is recommended that respondents be provided with an information sheet containing key details about the assessment and affirming the voluntary nature of participation, and that they be asked to provide verbal consent to participate.

ADAPTATION OF THE APPROACH

In order to ensure objectivity, this assessment was designed for implementation led by a team external to the government ministry; however, the approach may be adapted to a less rigorous internally conducted assessment where resources for contracting an external team are not available.

Whether conducted using an external or internal team, the assessment requires a high level of engagement and collaboration from ministry and partner personnel and other stakeholders – including a commitment to address the recommendations resulting from this assessment. Those who do the work every day have invaluable knowledge about the challenges faced, and will likely have ideas for solutions as well. Therefore, it is vital to engage stakeholders not only as respondents during data collection, but also as contributors to the validation and refinement of final findings and recommendations.

DATA SYSTEMS ASSESSMENT TOOLS

LANDSCAPE SURVEY QUESTIONNAIRE

The Landscape Survey Questionnaire is a structured survey tool designed to collect information on the context in which cervical cancer data and data systems reside. In order to best identify opportunities for strengthening data systems, it is important to not only assess the existing systems, but also the country context and programme landscape in which they operate. As such, the Landscape Survey Questionnaire gathers information within nine key domains:

Domain 1

Demographics and Epidemiology – Gathers available population demographic and surveillance data relevant to understanding national cervical cancer epidemiology; collects descriptive information on cancer registry.

Domain 2

Governance, Management and Infrastructure – Documents the structure, organization and capacity of the entities responsible for health care and cervical cancer policy, governance, and programme management.

Domain 3

Policies, Plans, Strategies and Clinical Guidelines – Documents the existence and basic content of policies, plans and guidelines relevant to cervical cancer.

Domain 4

Service Availability and Utilization – Collects key data points and information in order to describe the landscape of available cervical cancer prevention and control services and their use.

Domain 5

Human Resources for Health – Collects key data points and information necessary to understand the availability of health professionals to provide cervical cancer services, and the relevant training opportunities available.

Domain 6

Equipment, Supplies and Medicines – Gathers information on the availability of basic equipment, supplies and medicines necessary to provide quality cervical cancer services.

Domain 7

Laboratory – Documents the laboratory system landscape and gathers information to describe the services and linkages relevant to cervical cancer prevention and control services.

Domain 8

Financing, Budgeting and Costing – Collects information to describe budgeting and financing for cervical cancer services and programming.

Domain 9

Health Information Systems Overview – Documents and describes the health information systems context in which cervical cancer programmes and services operate; and identifies structures, systems and processes for the collection, management, analysis and use of client level and aggregate data for patient and programme monitoring.

The responses to the Landscape Survey Questionnaire are obtained primarily in Phase 1 of the assessment, and serve to frame the second phase of data collection and inform the final analyses and recommendations development. Additionally, findings from the landscape survey can be used to develop a programme summary or fact sheet for advocacy, partnership development and communications.

IN-DEPTH DISCUSSION GUIDE

The In-depth Discussion Guide is a semi-structured interview tool which uses open-ended questions (accompanied by more targeted probes) to gather detailed descriptive information. The questions and probes build on the basic context information collected through the landscape survey by soliciting additional information classifiable under nine predetermined standard themes associated with data and data systems (Table 1.1).

Data are primarily collected through interviews with Ministry and partner personnel who have extensive knowledge of one or more of the landscape survey domains, data system themes, or general content areas (i.e. key informants). Information collected through the interviews is supplemented by additional desk review and direct observation of data systems and practices, guided by the questions and probes in the Discussion Guide.

TABLE 1.1
Data system themes

DATA SYSTEM THEME	EXAMPLE QUESTIONS AND PROBES
Context	How many different policies, plans or strategies govern cervical cancer prevention and control? What is the level of integration between screening and PCL treatment and invasive cervical cancer?
Information and Communication Technology (ICT) Infrastructure	Are there key examples in the health-care sector of leveraging available ICT infrastructure for programming (e.g. data collection and management, patient follow-up, etc.)?
Governance, Management and Coordination	Do the different ministries or departments that oversee health care and information technology have standing coordination meetings, working groups or other collaborative opportunities?
Data Policies, Plans, Strategies and Guidelines	Are there guidelines for reporting invasive cervical cancer data into cancer registries? Are there guidelines for monitoring and quality control of the data?
Systems and Processes	What are the systems and processes to collect these data? How are the data aggregated and analysed? Are paper-based or electronic systems (or registries) in use?
Health Information Exchange	Are these data systems integrated with or linked to any other systems? Can information readily be shared between systems? Please describe the process.
Data Quality	What is the quality of these data in terms of the following 7 dimensions: Accuracy; Completeness; Conformity; Consistency; Duplication; Integrity; and Timeliness?
Accuracy	*Do the data being collected and reported reflect the true observed situation?*
Completeness	*Are all client level forms or facility registers filled out completely?* *Are there specific data elements that are most frequently left incomplete/blank?*
Conformity	*Do data values conform to the specified formats? What are the gaps?*
Consistency	*Are the values or response options for specific data elements standardized and consistent across datasets?*
Duplication	*Are there multiple unnecessary representations of the same data within your datasets?* *Are the same static data elements collected multiple times?*
Integrity	*Are vital relationships and linkages between data elements maintained throughout exchanges?* *What processes seem to corrupt data most frequently?*
Timeliness	*Are data reported in a timely fashion?* *Are specific data elements barriers to timely collection and reporting?*
Data Access and Use	How and by whom have these data been used in the past 12 months? If access is a barrier to obtaining timely data, who currently has access to these data? What is the process to expand access?
Budget and Financing	What percentage of the cervical cancer programme budget is allocated for Monitoring and evaluation, surveillance, and information systems?

PHASE 1 DATA COLLECTION: CONDUCTING THE LANDSCAPE SURVEY

ADMINISTRATION OF LANDSCAPE SURVEY QUESTIONNAIRE

As detailed in Table 1.2, the embedded (or other designated) RAP team member administers the Landscape Survey Questionnaire using one of the following methods:

1. Self-administration by RAP team member

2. Self-administration of specific domains, sections or questions by key Ministry or implementing partner personnel, based on their area of expertise

3. RAP team member administration of questionnaire to key Ministry or implementing partner personnel, based on their area of expertise

Responses to the structured survey questions, and information on data sources where applicable, should be entered into the tool or database designated by the assessment lead.

DESK REVIEW

The goal of the desk review is to gather information to supplement the landscape survey responses from readily

available documents, reports, and other data sources. A list of suggested key documents for desk review has been included as part of the Implementation Tools and Materials at the end of this section.

Documents will be collected through in-country sources by the embedded RAP team member and through web searches by the other RAP team members (see Table 1.2). Internet searches should be targeted, using key search terms pulled from the relevant landscape survey questions. The team lead may assign RAP team members specific questions or domains for the review.

Relevant content is identified in the source documents using a mixture of approaches (e.g. key word search, skimming or reading the full document, etc.), using the landscape survey questions as a guide for key content to be recorded. In addition to content, the following information should be recorded for each document reviewed:

1. Name of document
2. Information regarding time of publication (e.g. date or year of publication, years covered by a long-term strategic plan, etc.)
3. Page number within the document where relevant text is located
4. URL for the website where document was found, or file name of document if a shared drive is being used for assessment files

TABLE 1.2
Summary of Phase 1 data collection methods

DATA COLLECTION METHOD	PRACTICAL DESCRIPTION
Self-administration of structured survey questionnaire by the embedded RAP team member	The embedded RAP team member will complete as much of the survey as possible based on their technical area of expertise and depth of programme knowledge.
Self-administration of structured survey questionnaire by key Ministry and/or partner organization personnel	Questions outside of the embedded RAP team member's area of programme knowledge can be answered through self-administration of the survey questionnaire by knowledgeable personnel.
Administration of structured survey questionnaire to key Ministry and/or implementing partner personnel	Questions outside of the embedded RAP team member's area of programme knowledge will be answered through administration of the survey questionnaire to knowledgeable personnel.
Desk review of key documents and existing information by RAP team	Documents be collected through in-country sources and internet searches. Documents are then reviewed to obtain or validate responses to the structured survey questions as needed.

WHEN DATA ARE NOT AVAILABLE

When specific data points (e.g. number of obstetricians or gynecologists; number of invasive cervical cancer cases per year, etc.) are not readily available in a report, database, or other existing document or system, efforts need not be made to collect or generate this information from primary sources and aggregate in order to complete the survey questions. Data not available is a valuable and informative response in this assessment.

EXAMPLE SCENARIO:

- The embedded RAP team member does not have access to the numbers of health-care workers in each cadre (Domain 5).
- As the next step, the team member contacts someone in the Ministry who could potentially have this human resource information in a database, report or other source.
- The additional contact (or their team) does not have this information available, and suggests that the RAP team member contact each facility directly to collect the number of health-care workers in each cadre at each facility and then aggregate these data to arrive at national level numbers.
- The RAP team member recognizes that these would be data collected from a primary source for the sole purpose of responding to the landscape survey questions, and rather selects "Data Not Available" as the appropriate response.

PHASE 1 DATA REVIEW AND PRELIMINARY ANALYSES

The full assessment team will review landscape survey responses on a regular schedule defined by the team lead. During the routine review, RAP team members will identify key gaps in information as well as any SWOTs:

1. Strengths – existing functional practices, processes, structures, strategies, policies, etc. within the cervical cancer programme or service delivery context.

2. Weaknesses – absence of a coordinated or dedicated programme; absence of strategies, policies or documents, or the absence of key content within existing strategies, policies or documents; etc.

3. Opportunities – external factors such as programmes, strategies, approaches that can be leveraged or used as models to strengthen or expand ministry cervical cancer activities, enhance monitoring and evaluation, develop targeted actionable policies and strategies, etc.

4. Threats – external factors such as heavy reliance on donor funding or partner organizations for programme implementation, management, monitoring or service delivery; lack of a coordinated ICT infrastructure; etc.

This preliminary analysis will be validated and expanded during Phase 2 to inform the final SWOT analysis on which the recommendations will be built.

While preliminary strengths, weaknesses, opportunities and threats may be identified through the landscape survey, the participatory techniques employed in the second phase of data collection gather more granular information and will aid in developing more actionable recommendations.

EXAMPLE SCENARIO:

During completion of the landscape survey the assessment team finds that the cervical cancer surveillance data queried in Domain 1 is available, but is not current. The team therefore identifies a lack of timely data as a preliminary weakness and provides a recommendation to strengthen processes to ensure timely data entry.

During Phase 2 interviews, the team asks a key informant why the data are not current. The key informant responds that the unit was downsized several years ago and while data are still entered in a timely fashion, none of the remaining staff were trained to extract data from the system, resulting in their use of old reports to complete the landscape survey. This additional detail serves to identify a more specific weakness (lack of trained staff), as well as an external threat (mandated downsizing without support for transition), and the team is now able to generate a more actionable recommendation to allocate the necessary resources to train existing staff – a recommendation which can be used to advocate for resources and sustainability planning.

RECONCILING CONFLICTING RESPONSES

In the event of conflicting data or responses, RAP team members should discuss the conflict and weigh factors pertaining to the data source (e.g. quality of data in a report or system, area of the survey respondent's expertise, etc.) in order to come to a consensus. If the conflict cannot be resolved, the issue should be flagged for follow up during Phase 2.

PREPARING FOR PHASE 2

REFINING THE DISCUSSION GUIDE

The RAP team will collectively review all information collected during the 3 weeks of Phase 1 data collection, to identify any remaining gaps in landscape survey responses that will need to be addressed during Phase 2. The RAP team will then review the main Discussion Guide tool, and insert the remaining gaps as questions or probes (where not already addressed) – removing other questions or probes which are not applicable based on landscape survey responses (e.g. those asking about systems and processes to generate data where no data were available).

The RAP team then reviews the list of key contacts and their area of expertise, and allocates groups of questions (or themes) from the Discussion Guide to the appropriate contacts – attempting to ensure that the Discussion Guide for each contact is comprehensive enough to avoid repeat interviews. Where possible, questions should be allocated to more than one contact in order to avoid potential bias resulting from a single-source of information.

If specific questions or themes are lacking a contact (i.e. respondent) for the interviews – and the information cannot be gathered via direct observation or desk review – referrals should be solicited from other respondents during the initial rounds of interviews.

INTERVIEW SCHEDULING

Scheduling of the initial Phase 2 interviews will be largely dependent on the availability of key contacts. Depending on a respondent's area of expertise, and the number of questions they are expected to answer, interview time estimates may range from 30 minutes to 3 hours.

Interviews with high level Ministry officials regarding context (i.e. budget allocation, health system structure, etc.) may be completed in significantly less time than interviews with M&E or data management personnel. To ensure that the contact understands expectations, the contact can be sent the parent questions allocated to them along with the assessment information sheet when approaching them for interview participation.

As referral sampling is employed in this assessment, it is important to leave time during the second week of Phase 2 data collection for interviews with second or third tier contacts for the themes or content areas requiring the most depth (e.g. client level data systems, aggregate data systems, referral systems, health information exchange, etc.).

PHASE 2 DATA COLLECTION: IN-DEPTH INVESTIGATION OF DATA SYSTEMS

INTERVIEWS

RAP team members will conduct interviews in pairs to ensure high quality interviews and data collection. One team member is designated as the primary discussion facilitator, and the other is primarily responsible for taking detailed notes on the discussion; however, BOTH team members should participate in the discussion on some level, and both should take notes to ensure data quality.

As noted in Table 1.3, individuals targeted for Phase 2 interviews are those ministry and programme personnel with practical knowledge in one or more of the 9 Landscape Survey domains, and the content categorized under one or more of the 9 data system themes. Interviews may be conducted with one respondent alone, or may be conducted with a group of respondents (e.g. an M&E team or unit; the unit responsible for procurement of equipment and supplies; etc.) using a participatory discussion group format directed by the Discussion Guide, if deemed more efficient.

The RAP team members open each interview by introducing themselves, presenting the respondent with the assessment information sheet, ensuring that the respondent consents to being interviewed, and answering any questions that the respondent may have about the assessment. The RAP members then begin the interview by asking the initial open-ended question from the Discussion Guide developed for that respondent, and allowing the respondent to answer in their own words, with as much detail as they wish to provide initially. The probes that follow the initial question are much more targeted than the initial question, and are designed to solicit key information within the data system themes. If the interviewees initial response does not provide enough detail to fully address the probes, the RAP team members will use the probes as follow-up questions.

Where gaps in information or respondent knowledge exist, or where a secondary source is not yet identified, RAP team members will request referral of additional contacts from the initial interview respondent (snowball sampling). Obtaining information from multiple sources for each theme is encouraged in order to obtain a complete non-biased picture of the situation.

Information collected during the interview (in the form of notes) will be reviewed collectively by both team members immediately following the interview to ensure that all questions and probes designated for that respondent have been fully addressed. Missing information due to RAP team member oversight will need to be obtained as soon as possible through a return interview with the respondent, or through a follow-up phone call or email. Information that is missing due to a lack of response from the interviewee (e.g. information was outside their scope of expertise) should be flagged for incorporation into the Discussion Guide for the next respondent identified for the set of questions or themes. If interview information was not collected directly into the assessment data collection tool or database, the RAP team members will enter the information prior to the daily debrief.

Subsequent interviews will be conducted until no new information emerges (i.e. information saturation) for a theme or defined sets of questions, and any conflicting responses or information have been resolved.

The RAP team will conduct interviews with personnel from the identified exemplar programmes (and direct observation) as agreed upon with the stakeholders and the embedded RAP team member.

DIRECT OBSERVATION

Direct observation is employed primarily to collect additional information on:

- the functionality, content or scope of existing electronic systems (e.g. through demonstrations or walk-throughs by systems users);
- the quality of data in electronic or paper-based systems (e.g. through cursory review of completed forms, registers or registries, or databases and systems); and

- data use (e.g. through observation of posters or graphs tracking specific indicators, or observations of electronic dashboards)

RAP team members will use the Discussion Guide to identify key content that should be recorded during the observation. Direct observation should be cross-referenced with information obtained from interviews, desk review or the Landscape Survey Questionnaire (see Table 1.3) to validate non-observational responses – and to identify conflicting responses. If observation findings were not collected directly into the assessment data collection tool or database, RAP team members will enter the information prior to the daily debrief.

Clinical procedures should not be observed at any time during the assessment. Patient level data should not be abstracted or collected at any time during the assessment.

DESK REVIEW

Details and information on the desk review can be found in the earlier subsection "Phase 1 Data Collection: Conducting the Landscape Survey", and below in Table 1.3.

TABLE 1.3
Summary of Phase 2 data collection methods

DATA COLLECTION METHOD	PRACTICAL DESCRIPTION
In-depth semi-structured or unstructured interviews with key Ministry and/ or implementing partner personnel	A **semi-structured approach** follows the Discussion Guide closely, and is best used when interviewing those with limited time availability, or those who are the key contacts for a number of topics. An **unstructured approach** is best used when the interviewer has a clear agenda for the discussion (i.e. specific gaps have been identified), when information appears to be reaching saturation (i.e. no new information is being generated from interviews), or for information validation. This type of interview can begin with the interviewer recounting the information already gathered, in order to seek confirmation or an alternative response from the interviewee.
Direct observation	The RAP team observes data collection, management or practical use of data systems in the field under typical conditions, guided by the questions and probes in the Discussion Guide.
Desk review of key documents and existing information by RAP team members	Additional relevant documents may be uncovered as a result of interviews with key personnel, or identification of specific system gaps. Documents are then reviewed, adding any new information to the previous landscape survey responses.

PHASE 2 DATA ANALYSIS AND DEVELOPMENT OF RECOMMENDATIONS

ONGOING REVIEW AND ANALYSIS

The full assessment team will collectively review Discussion Guide responses on a daily basis. The information gathered from each interview (or observation), and any strengths, weaknesses, opportunities or threats identified, will be first collated by data system theme to identify any major gaps, as well as errors or misclassified SWOT. The information can then be further categorized by any subthemes (e.g. Systems and Processes: Client Level Systems; Systems and Processes: Aggregate Systems, etc.) or emergent themes not previously identified, in order to identify remaining gaps in information.

Based on the review, and information gaps identified, interview discussion guides will be refined prior to the next days' interviews.

When a theme reaches the point of information saturation, the RAP team will work together to refine the preliminary SWOT analysis and develop preliminary recommendations, effectively closing out data collection for that theme.

If conflicting responses – including those identified during Phase 1 – are not resolved by completion of the Phase 2 interviews, the issue should be flagged for discussion and consensus generation during the final assessment stakeholder debrief session.

DEVELOPMENT OF RECOMMENDATIONS

The RAP team will develop recommendations in line with the change management approach to organizational improvement and redirection of resources. Recommendations will be classified into one of four core elements: Policy, People, Process, and Technology. These

core elements allow for the recommendations to be directly actionable, with responsible parties easily identified.

Findings from the refined SWOT analyses can be characterized into one of the four core elements, and then translated into recommendations for improvement by replacing passive words with action words. The refined analyses and preliminary recommendations will be presented to stakeholders at the assessment debrief for validation and feedback prior to finalization.

EXAMPLE: SWOT ANALYSIS OF SYSTEMS AND PROCESSES THEME (CLIENT LEVEL DATA SUBTHEME)

STRENGTHS:

- Standardized registers for screening and precancerous lesion treatment have recently been developed

WEAKNESSES:

- No nationally standardized data collections forms for screening
- No nationally accepted minimum dataset for invasive cervical cancer
- Lack of adequate human resources to support client level data systems

OPPORTUNITIES:

- An exemplar programme exists which has fully implemented standardized data collection forms
- Once nationally standardized forms are developed, the Ministry-endorsed electronic system for patient health data can easily integrate data elements from those forms

THREATS:

- There are multiple, disconnected systems collecting patient data, which will make it difficult to coordinate and standardize information
- The Ministry-endorsed electronic system for patient health data may not be accessible to all providers or facilities (due to connectivity issues)
- Ministry is unable to provide sufficient funding for human resources for client level data systems support

RECOMMENDATIONS

POLICY:

1. Consultatively develop minimum datasets for screening and treatment of cervical cancer
2. Consultatively standardize data collection forms based on the agreed upon minimum datasets, using the exemplar programme forms and processes as a model

PEOPLE:

1. Improve knowledge and capacity of Ministry information technology (IT) personnel to support and maintain client level data systems through training

PROCESSES:

1. Leverage the new register roll out and trainings for opportunities to optimize processes and data flow for client-level data collection and quality

TECHNOLOGY:

1. Incorporate cervical cancer data elements (i.e. client-level forms) into Ministry-endorsed electronic system for patient health data
2. Improve information and system inter-operability through harmonization of data elements; or support transition to Ministry-endorsed system
3. Explore Health and mobile network solutions for increasing provider and facility access to the Ministry-endorsed electronic system

IMPLEMENTATION TOOLS AND MATERIALS

ASSESSMENT ROLES AND RESPONSIBILITIES CHECKLISTS

These checklists are intended for use in building the Rapid Assessment Process (RAP) team and creating country-specific assessment standard operating procedures and implementation plans or protocols. These lists of responsibilities are intended to be comprehensive but not exhaustive, and should be adapted or expanded as needed.

Where the assessment is being conducted by a party external to the Ministry or government system, the embedded RAP team member should be sourced from inside the Ministry or programme to ensure collaboration, as well as incorporation of institutional knowledge. Where the assessment is being conducted internally, the checklists below can be adapted to better reflect teams sourced only from the Ministry, for example: the role of the embedded RAP team member can be replaced with an additional team member with expertise and knowledge in data systems, informatics, monitoring and evaluation or surveillance; and the responsibilities of the embedded team member can be re-allocated to the RAP team lead (e.g. ensure completion of the landscape survey questionnaire), the assessment lead (e.g. work with RAP team lead to coordinate interview scheduling and itinerary), and assessment team members (e.g. collect documents for desk review; maintain complete and extensive field notes; etc.).

PRE-ASSESSMENT CHECKLIST

ASSESSMENT ROLE (Total Personnel: 3–4)	**PLANNING RESPONSIBILITIES** The following responsibilities should be fulfilled prior to beginning any data collection activities.
ASSESSMENT LEAD/PRINCIPAL INVESTIGATOR (1–2)	☐ Develop budget for assessment implementation and ensure necessary funds are in place ☐ Coordinate with Ministry and collaborators to identify embedded RAP team member ☐ Coordinate with Ministry and collaborators and embedded RAP team member to develop assessment timeline ☐ Choose RAP team members and designate team lead ☐ Collaborate with embedded RAP team member and RAP team lead to adapt assessment tools to country context and develop country-specific materials ☐ Develop data capture and management methods (e.g. paper-based data collection, excel spreadsheet data capture, tablet or smart phone data entry platform, etc.), and ensure appropriate data protection and quality assurance measures are in place ☐ Coordinate with embedded RAP team member to ensure all necessary institutional approval processes are followed ☐ Ensure letters of approval have been circulated to Ministry and collaborator personnel and other assessment stakeholders
RAP TEAM LEAD (1)	☐ Work with assessment lead and embedded RAP team member to adapt assessment tools to country context and develop country-specific materials and data collection/capture tools ☐ Ensure RAP team is fully trained on assessment tools and processes ☐ Assign phase 1 responsibilities to each RAP team member ☐ Work with embedded RAP team member to plan in-brief meeting (before Phase 1 and/or Phase 2) ☐ Serve as primary point of contact for collaborators, assessment lead, embedded RAP team member, and assessment team
EMBEDDED RAP TEAM MEMBER (1)	☐ Work with assessment lead and RAP team lead to adapt assessment tools to country context and develop country-specific materials and data collection/capture tools ☐ Work with assessment lead and RAP team lead to ensure all necessary institutional approval processes are followed

PHASE 1 CHECKLIST

ASSESSMENT ROLE (Total Personnel: 6–7)	**RESPONSIBILITIES** The following responsibilities should be fulfilled during the 3–4 weeks of Phase 1 data collection and analysis.
ASSESSMENT LEAD/PRINCIPAL INVESTIGATOR (1–2)	☐ Ensure letters of approval have been circulated to Ministry and collaborator personnel, and other assessment stakeholders ☐ Provide supervisory oversight for data entry and management, and monitor data protection and quality ☐ Supervise ongoing data analysis and preliminary identification of Strengths, Weaknesses, Opportunities, and Threats (SWOT) ☐ Ensure that key contacts identified for interviews are representative of country activities
RAP TEAM LEAD (1)	☐ Work with embedded RAP team member to plan in-brief meeting (before Phase 1 and/or Phase 2) ☐ Provide supervision for Phase 1 data collection and lead regular check-in meetings to monitor progress and data quality ☐ Ensure team compliance with data capture, management, protection and quality assurance methods and processes ☐ Continuously work with RAP team members to determine outstanding gaps in landscape survey responses and to identify preliminary Strengths, Weaknesses, Opportunities, and Threats (SWOT) ☐ Work with RAP team members to refine the discussion guide based on gaps in information following landscape survey completion ☐ Work directly with embedded RAP team member to create interview schedules and itineraries for team members, and serve as co-coordinator for team interviews ☐ Serve as primary point of contact for collaborators, assessment lead, embedded RAP team member, and assessment team ☐ Identify and escalate any issues or concerns to the embedded RAP team member and assessment lead
EMBEDDED RAP TEAM MEMBER (1)	☐ Collect documents for Desk Review and share with RAP team lead ☐ Ensure completion of landscape survey questions through self-administration or administration of survey to key personnel and desk review ☐ Participate in regular check-in meetings to share landscape survey findings and monitor data collection progress and data quality ☐ Identify key Ministry and partner contacts to act as respondents for Phase 2 interviews and ensure that contacts are representative of country activities at all levels (national, subnational, etc.) and through all funding streams (government, donor, private facilities, etc.) ☐ Work with RAP team lead to plan Phase 2 interview schedule, and schedule interviews with key contacts ☐ Serve as primary point of contact for key contacts (i.e. interview respondents) and co-coordinator for team interviews ☐ Work with RAP team lead to plan Phase 2 in-brief meeting (if applicable) including: sending invitations letters, securing a location, and sharing a template for presentations
CLINICAL CONTENT SPECIALIST (1)	☐ Conduct desk review of key documents on clinical services, guidelines, etc. as assigned by RAP team lead ☐ Participate in regular check-in meetings to share desk review findings and monitor data collection progress and data quality ☐ Continuously work with RAP team lead and other members to determine outstanding gaps in landscape survey responses and to identify preliminary Strengths, Weaknesses, Opportunities, and Threats (SWOT)
DATA SYSTEMS, M&E, AND INFORMATICS SPECIALISTS (2)	☐ Conduct desk review of key documents on eHealth, information technology, guidelines, etc. as assigned by RAP Team Lead ☐ Participate in regular check-in meetings to share desk review findings and monitor data collection progress and data quality ☐ Continuously work with RAP team lead and other members to determine outstanding gaps in landscape survey responses and to identify preliminary Strengths, Weaknesses, Opportunities, and Threats (SWOT)

PHASE 2 CHECKLIST

ASSESSMENT ROLE (Total Personnel: 6–7)	**RESPONSIBILITIES** The following responsibilities should be fulfilled during the 2 weeks of Phase 2 data collection and analysis. This list of responsibilities is intended to be comprehensive but not exhaustive, and should be adapted or expanded as needed.
ASSESSMENT LEAD/PRINCIPAL INVESTIGATOR (1–2)	☐ Ensure letters of approval have been circulated to Ministry and collaborator personnel, and other assessment stakeholders ☐ Provide supervisory oversight for data entry and management, and monitor data protection and quality ☐ Supervise ongoing data analysis, identification of Strengths, Weaknesses, Opportunities, and Threats (SWOT), and development of preliminary recommendations
RAP TEAM LEAD (1)	☐ Review final interview discussion guides with RAP team interviewers before each interview is conducted ☐ Maintain complete and extensive field notes and complete in-depth discussions with a wide variety of respondents, ensuring that the content area has been exhausted (e.g. no new information is being provided) ☐ Supervise integration and analysis of findings from the in-depth interviews/discussions, landscape survey and desk review ☐ Ensure team compliance with data capture, management, protection and quality assurance methods and processes ☐ Work directly with embedded RAP team member to create interview itineraries for team members, review refined discussion guides for each respondent, and serve as coordinator for team interviews ☐ Serve as point of contact between assessment lead, embedded RAP team member, and the RAP team ☐ Lead in-brief (Phase 1 and/or Phase 2) and out-brief, daily team debriefs, and coordinate and facilitate out-brief ☐ Identify and escalate any issues or concerns to the assessment lead and embedded RAP team member
EMBEDDED RAP TEAM MEMBER (1)	☐ Maintain complete and extensive field notes and complete in-depth discussions with a wide variety of respondents, ensuring that the content area has been exhausted (e.g. no new themes are arising) ☐ Support integration and analysis of findings from the in-depth interviews/discussions, landscape survey and desk review and refinement and organization of discussion guides for each respondent ☐ Facilitate in-brief (Phase 1 and/or Phase 2) and out-brief and support the RAP team in data collection implementation (e.g. logistics, transportation, etc.).
CLINICAL CONTENT SPECIALIST (1)	☐ Maintain complete and extensive field notes and complete in-depth discussions with a wide variety of respondents, ensuring that the content area has been exhausted (e.g. no new themes are arising) ☐ Integrate and analyse the findings from the in-depth interviews/discussions, landscape survey and desk review ☐ Organize discussion guide questions by respondent, and refine interview discussion guides for each respondent in their assigned domain, cross-referencing the landscape survey responses and other discussion guide domains as noted to identify gaps and avoid duplication
DATA SYSTEMS, M&E, AND INFORMATICS SPECIALISTS (2)	☐ Maintain complete and extensive field notes and completes in-depth discussions with a wide variety of respondents, ensuring that the content area has been exhausted (e.g. no new themes are arising) ☐ Integrate and analyse the findings from the in-depth interviews/discussions, landscape survey and desk review ☐ Organize discussion guide questions by respondent and refine interview discussion guides for each respondent in their assigned domain, cross-referencing the landscape survey responses and other discussion guide domains, as noted, to identify gaps and avoid duplication

POST-ASSESSMENT CHECKLIST

ASSESSMENT ROLE (Total Personnel: 6–7)	**POST-ASSESSMENT RESPONSIBILITIES** The following responsibilities should be fulfilled following Phase 2 of data collection.
ASSESSMENT LEAD/PRINCIPAL INVESTIGATOR (1–2)	☐ Supervise the drafting of the assessment report, with specific focus on recommendations development ☐ Work with MoH and collaborators, and other assessment stakeholders to finalize the assessment report dissemination plan
RAP TEAM LEAD (1)	☐ Assign assessment report sections RAP team members for completion ☐ Review analyses and lead drafting of the assessment report, ensuring that feedback from the out-brief has been incorporated ☐ Submit assessment report to the assessment lead for review and final recommendations verification
EMBEDDED RAP TEAM MEMBER (1)	☐ Assist in the drafting of the assessment report through verification of findings and provide follow up where needed in order to fill any remaining gaps ☐ Work with MoH and collaborators, and other assessment stakeholders to finalize the assessment report dissemination plan
CLINICAL CONTENT SPECIALIST (1)	☐ Complete the analysis of findings, incorporating feedback from the out-brief meeting, and write assessment report sections as assigned by RAP team lead
DATA SYSTEMS, M&E, AND INFORMATICS SPECIALISTS (2)	☐ Complete the analysis of findings, incorporating feedback from the out-brief meeting, and write assessment report sections as assigned by RAP team lead

LANDSCAPE SURVEY QUESTIONNAIRE

LANDSCAPE DOMAIN 1: DEMOGRAPHICS AND EPIDEMIOLOGY

The primary objective of this domain is to document population demographic data and surveillance data relevant to understanding national cervical cancer epidemiology. The secondary objective is to determine the availability of current population demographic and surveillance data, and identify its sources, as a prerequisite to the next phase of data collection.

DEMOGRAPHICS

1.1 *What is the total population in the country?*

Number:
Data Year:
Data Source:
☐ Data Not Available

1.2 *What is the total female population in the country?*

Number:
Data Year:
Data Source:
☐ Data Not Available

1.3 *What is the number of women aged 21–29 years in the country?*

Number:
Data Year:
Data Source:
☐ Data Not Available

1.4 *What is the number of women aged 30–59 years in the country?*

Number:
Data Year:
Data Source:
☐ Data Not Available

MORTALITY AND VITAL STATISTICS

1.5 *What is the "All Cause" crude mortality rate in the country?*

Overall Rate:
Rate for Males:
Rate for Females:
Data Year:
Data Source:
☐ Data Not Available
Sex-disaggregated
☐ Data Not Available

1.6 *Can the "All Cause" crude mortality rate be disaggregated by Age?*

☐ Yes ☐ No
If Yes, how is Age broken down (e.g. predetermined age categories [please list categories], individual ages):

1.7 *At which level is there a system for registration of vital statistics?*

Please indicate all levels at which data collection occurs
☐ National ☐ Subnational
☐ Facility/Institution ☐ Community
☐ No system for vital statistics

HIV EPIDEMIOLOGY

1.8 *What is the HIV prevalence rate?*

Overall Rate:
Rate for Males:
Rate for Females:
Data Year:
Data Source:
☐ Data Not Available
Sex-disaggregated
☐ Data Not Available

1.9 *Can the HIV prevalence rate be disaggregated by Age?*

☐ Yes ☐ No
If Yes, how is Age broken down (e.g. predetermined age categories [please list categories], individual ages):

CERVICAL CANCER EPIDEMIOLOGY

1.10 *What is the incidence rate for invasive cervical cancer in the country?*

Rate:
Units: ☐ Per 100 000 women per year
☐ Per 100 000 population per year
Data Year:
Data Source:
☐ Data Not Available

1.11 *What is the total number of deaths from invasive cervical cancer per year (Cervical Cancer Mortality Rate)?*

Rate:
Units: ☐ Per 100 000 women per year
☐ Per 100 000 population per year
Data Year:
Data Source:
☐ Data Not Available

1.12 ***Is there a cancer registry?***

☐ Yes – at National level
☐ Yes – at Subnational level
☐ Yes – at Facility/hospital level
☐ No

1.13 ***Is there a separate registry for invasive cervical cancer other than the general cancer registry?***

☐ Yes – at National level
☐ Yes – at Subnational level
☐ Yes – at Facility/hospital level
☐ No

1.14 ***Is cervical cancer screening and precancerous lesion treatment captured by the general cancer or cervical cancer registry?***

☐ Yes ☐ No
If No, is there a separate registry?
☐ Yes – at National level
☐ Yes – at Subnational level
☐ Yes – at Facility/hospital level
☐ No

1.15 ***Is there a registry that captures individuals immunized for HPV?***

☐ Yes – at National level
☐ Yes – at Subnational level
☐ Yes – at Facility/hospital level
☐ No
If Yes (at any level), is the registry separate from the general immunization registry?
☐ Yes ☐ No

1.16 ***When was the most recent population-based survey which included questions on cervical cancer conducted?***

☐ Year:
☐ Name of Survey:
☐ No population-based survey including cervical cancer questions ever conducted

LANDSCAPE DOMAIN 2: GOVERNANCE, MANAGEMENT AND INFRASTRUCTURE

The primary objective of this domain is to document the structure, organization and capacity of the entities responsible for health care and cervical cancer policy, governance, programming and management.
The secondary objectives are: to preliminarily identify associated strengths, weaknesses, opportunities and threats; and to identify key contacts for the next phase of data collection.

INFRASTRUCTURE

2.1 ***Does a basic framework for delivering energy, transport, water and sanitation, and information and communication technology services exist?***

☐ Yes ☐ No ☐ Don't Know

2.2 ***Are there national efforts to document measures on political stability, government effectiveness and control of corruption aligned with international governance and corruption indicators?***

☐ Yes ☐ No ☐ Don't Know

2.3 ***What are the country data for the following ITU key telecommunication/ICT indicators?***

Retrieve data from:
http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx
Overall country score:
☐ Data Not Available
Percentage improvement in country score since 2008:
☐ Data Not Available
Fixed-telephone subscriptions:
☐ Data Not Available
Mobile-cellular subscriptions:
☐ Data Not Available
Active mobile-broadband subscriptions:
☐ Data Not Available
Wired-broadband subscriptions:
☐ Data Not Available
Households with a computer:
☐ Data Not Available
Households with internet access at home:
☐ Data Not Available
Individuals using the internet:
☐ Data Not Available
Data Year:
Data Source:

GENERAL HEALTH-CARE GOVERNANCE

2.4 ***Is there an organizational structure for national health-care governance?***

☐ Yes – centralized ☐ Yes – decentralized ☐ No

2.5 ***Is there more than one national government Ministry or institution that oversees health care?***

☐ Yes ☐ No
If Yes, please provide the Ministry or institution name and a key contact for each.
Name:
Contact:

2.6 *Is there a diagram or narrative of the current structure and organization of the national government Ministries or institutions that oversee health?*

☐ Yes – current ☐ Yes – not current
☐ No ☐ Not accessible
If Yes, please provide a copy or link.

CERVICAL CANCER GOVERNANCE AND MANAGEMENT

2.7 *Is there a dedicated cervical cancer screening and PCL treatment (cervical cancer secondary prevention) section, programme or unit within the MoH (or its equivalent)?*

This refers to a unit/programme that coordinates and manages guidelines, policy, or programme for cervical cancer screening and PCL treatment.
☐ Yes ☐ No
If Yes, what is the name of the programme/unit and the department that it sits within?
Programme/Unit Name:
Dept. Name:
If No, what programme/unit has authority over cervical cancer screening and PCL treatment?
Programme/Unit Name:
Dept. Name:

2.8 *What is the number of staff working in the cervical cancer screening and PCL treatment section, programme or unit?*

Senior managers:
Permanent staff:
Temporary/contract staff:
External consultants:
Epidemiologists/statisticians:
TOTAL staff (categories overlap – may not be sum of above):
Data Year:
Data Source/s:
☐ Data Not Available

2.9 *At which level is the cervical cancer screening and PCL treatment programme organized within your country?*

Select one best option:
☐ National level (organizes and monitors most cervical screening programmes in the country either directly or through Subnational offices)
☐ Subnational/ Subcountry levels (authority to organize and monitor cervical screening programme directly without direction or guidance from the central/ national level)
☐ NGO partners (organize and monitor most cervical screening programmes either in collaboration or independent of the government)
☐ Programme level (individual programmes or health care systems organize and manage screening without direction or guidance from the central/national level or Subnational authorities)

2.10 *Is there an invasive cervical cancer section, programme or unit within the MoH (or its equivalent)?*

This refers to a unit/programme that coordinates and manages guidelines, policy, or programme for invasive cervical cancer.
☐ Yes – same as screening and PCL treatment
☐ Yes – separate from screening and PCL treatment
☐ No
If Yes – separate from screening and PCL treatment, what is the name of the section, programme or unit and the department that it sits within?
Programme/Unit Name:
Department Name:
If No, what section, programme or unit has authority over invasive cervical cancer?
Section/Unit Name:
Department Name:

2.11 *What is the number of staff working in the invasive cervical cancer section, programme or unit?*

☐ Same as for screening and precancerous lesion treatment
Or, enter data for each cadre below
Senior managers:
Permanent staff:
Temporary/contract staff:
External consultants:
Epidemiologists/statisticians:
TOTAL staff (categories overlap – may not be sum of above):
Data Year:
Data Source/s:
☐ Data Not Available

2.12 *At which level is the treatment and management of invasive cervical cancer overseen and organized within your country?*

☐ Same as for screening and precancerous lesion treatment?
Or, select one best option:
☐ National level (organizes and monitors invasive cervical cancer programming in the country either directly or through subnational offices)
☐ Subnational/sub country levels (authority to organize and monitor invasive cervical cancer programming directly without direction or guidance from the central/national level)
☐ NGO partners (organize and monitor most invasive cervical cancer programming either in collaboration or independent of the government)
☐ Programme level (individual programmes or health care systems organize and manage invasive cervical cancer

programming without direction or guidance from the central/national level or subnational authorities)

2.13 *Is there a dedicated HPV vaccination (cervical cancer primary prevention) section, programme or unit within the MoH (or its equivalent)?*

This refers to a unit/programme that coordinates and manages guidelines, policy, or programme for HPV vaccination and cervical cancer primary prevention.
☐ Yes – same as screening and PCL treatment
☐ Yes – separate from screening and PCL treatment
☐ No
If Yes – separate from screening and PCL treatment, what is the name of the programme/unit and the department that it sits within?
Programme/Unit Name:
Department Name:
If No, what section/unit has authority over HPV Vaccination (cervical cancer primary prevention)?
Section/Unit Name:
Department Name:

2.14 *Are there organizations, agencies or institutions outside of the government that are responsible for aspects of cervical cancer prevention and control?*

☐ Yes ☐ No
If Yes, please provide the name of each entity and indicate the areas for which they are responsible (select all that apply).
1. Name:
Responsibilities:
☐ Policy
☐ Research
☐ Training
☐ Health promotion
☐ Diagnostics
☐ Service Delivery (Screening)
☐ Service Delivery (Invasive)
☐ Other:
2. Name:
Responsibilities:
☐ Policy
☐ Research
☐ Training
☐ Health promotion
☐ Diagnostics
☐ Service Delivery (Screening)
☐ Service Delivery (Invasive)
☐ Other:
3. Name:
Responsibilities:
☐ Policy
☐ Research
☐ Training
☐ Health promotion
☐ Diagnostics
☐ Service Delivery (Screening)
☐ Service Delivery (Invasive)
☐ Other:

LANDSCAPE DOMAIN 3: POLICIES, PLANS, STRATEGIES AND CLINICAL GUIDELINES

The primary objective of this domain is to document the existence and basic content of policies, plans and guidelines relevant to cervical cancer. The secondary objectives are: to understand how cervical cancer is prioritized in the broader health system; and to identify potential strengths, weaknesses, opportunities and threats associated with the coordination and management of cervical cancer programming.

3.1 *Is there a national health policy, plan or strategy? Does it address cervical cancer prevention and control?*

Select all that apply, and provide document name, time period covered (if applicable), and the areas of cervical cancer prevention and control which are addressed in each.
☐ Policy: ☐ Time Period:
  ☐ HPV Vaccination
  ☐ Screening
  ☐ PCL treatment
  ☐ Invasive Cervical Cancer
  ☐ Does not address cervical cancer prevention and control
☐ Plan: ☐ Time Period:
  ☐ HPV Vaccination
  ☐ Screening
  ☐ PCL treatment
  ☐ Invasive Cervical Cancer
  ☐ Does not address cervical cancer prevention and control
☐ Strategy: ☐ Time Period:
  ☐ HPV Vaccination
  ☐ Screening
  ☐ PCL treatment
  ☐ Invasive Cervical Cancer
  ☐ Does not address cervical cancer prevention and control
☐ Strategic Plan: ☐ Time Period:
  ☐ HPV Vaccination
  ☐ Screening
  ☐ PCL treatment
  ☐ Invasive Cervical Cancer
  ☐ Does not address cervical cancer prevention and control
☐ National health policy, plan or strategy does not exist

3.2 *Is there a national policy, plan or strategy for cancer prevention and control? Does it include cervical cancer prevention and control?*

Select all that apply, and provide document name, time period covered (if applicable), and the areas of cervical cancer prevention and control which are addressed in each.
☐ Policy: ☐ Time Period:
  ☐ HPV Vaccination

☐ Screening
☐ PCL treatment
☐ Invasive Cervical Cancer
☐ Does not address cervical cancer prevention and control

☐ Plan: ☐ Time Period:
☐ HPV Vaccination
☐ Screening
☐ PCL treatment
☐ Invasive Cervical Cancer
☐ Does not address cervical cancer prevention and control

☐ Strategy: ☐ Time Period:
☐ HPV Vaccination
☐ Screening
☐ PCL treatment
☐ Invasive Cervical Cancer
☐ Does not address cervical cancer prevention and control

☐ Strategic Plan: ☐ Time Period:
☐ HPV Vaccination
☐ Screening
☐ PCL treatment
☐ Invasive Cervical Cancer
☐ Does not address cervical cancer prevention and control

☐ National health policy, plan or strategy does not exist

3.3 *Is there a policy, plan or strategy specific to cervical cancer (in addition to the national cancer prevention and control policy)? What does it cover?*

Select all that apply, and provide document name, time period covered (if applicable), and the areas of cervical cancer prevention and control which are addressed in each.

☐ Policy: ☐ Time Period:
☐ HPV Vaccination
☐ Screening
☐ PCL treatment
☐ Invasive Cervical Cancer
☐ Does not address cervical cancer prevention and control

☐ Plan: ☐ Time Period:
☐ HPV Vaccination
☐ Screening
☐ PCL treatment
☐ Invasive Cervical Cancer
☐ Does not address cervical cancer prevention and control

☐ Strategy: ☐ Time Period:
☐ HPV Vaccination
☐ Screening
☐ PCL treatment
☐ Invasive Cervical Cancer
☐ Does not address cervical cancer prevention and control

☐ Strategic Plan: ☐ Time Period:
☐ HPV Vaccination
☐ Screening
☐ PCL treatment
☐ Invasive Cervical Cancer
☐ Does not address cervical cancer prevention and control

☐ National health policy, plan or strategy does not exist

3.4 *If policies, plans or strategies which address cervical cancer prevention and control exist, what cervical cancer screening method do they recommend?*

Select all that apply
☐ National policy, plan or strategy addressing cervical cancer does not exist
☐ Cytology/Pap smear
☐ VIA
☐ VILI
☐ HPV DNA test
☐ Other (specify):
☐ No recommendation

3.5 *What method for the treatment of precancerous lesions is recommended by policies, plans or strategies which address cervical cancer?*

Select all that apply
☐ Cryotherapy
☐ LEEP
☐ Conization
☐ Thermal/cold coagulation
☐ Other (specify):
☐ No recommendation

3.6 *Is a Single Visit Approach for cervical cancer screening and precancerous lesion treatment recommended by policies, plans or strategies?*

☐ Yes ☐ No

3.7 *Are there standardized national clinical practice guidelines for the following cervical cancer services?*

May be national guidelines or international guidelines adopted by the country, and may be standalone or may be integrated within other guidelines (e.g. HIV, reproductive health).
☐ Screening
☐ Treatment of precancerous lesions
☐ Management of invasive cervical cancer
☐ Clinical practice guidelines do not exist for cervical cancer services

3.8 *Are there clinical practice guidelines for cervical cancer screening specific to HIV infected women?*

☐ Yes ☐ No
If Yes, are these guidelines a separate document from the clinical practice guidelines for screening noted above?
☐ Yes ☐ No

LANDSCAPE DOMAIN 4: SERVICE AVAILABILITY AND UTILIZATION

The primary objective of this domain is to describe the landscape of available cervical cancer services and their utilization. The secondary objectives are to determine whether data on cervical cancer service availability, distribution and delivery are available and current; and to identify the sources of these data as a prerequisite to the next phase of data collection.

SERVICE AVAILABILITY

4.1 *What cervical cancer screening services are currently being provided?*

Select all that apply
☐ Pap Smear/cytology
☐ Visual Inspection with Acetic Acid (VIA)
☐ Visual Inspection with Lugol's iodine (VILI)
☐ Human papillomavirus (HPV) testing
☐ Other (please specify):

4.2 *At which level of the health-care system are cervical cancer screening services provided?*

Select all that apply
☐ Primary ☐ Secondary ☐ Tertiary
☐ National referral hospital

4.3 *Cervical cancer screening services are actively provided as part of.*

Select all that apply:
☐ Routine preventative services for women
☐ Maternal child health services
☐ HIV services
☐ Special campaign for cervical cancer preventions
☐ Other arrangement (specify):

4.4 *How many health care facilities in your country provide cervical cancer screening services?*

Total number of facilities:
☐ Data Not Available
Number of public (government) facilities:
☐ Data Not Available
Number of private facilities:
☐ Data Not Available
Number of other (e.g. NGO) facilities:
☐ Data Not Available
Data Year:
Data Source/s:

4.5 *What services are currently being provided for the treatment of precancerous cervical lesions?*

Select all that apply
☐ Cryotherapy
☐ LEEP
☐ Cold knife conization
☐ Simple hysterectomy
☐ Other (please specify):

4.6 *At which level of the health-care system are services for the treatment of precancerous cervical lesions provided.*

Select all that apply?
☐ Primary ☐ Secondary ☐ Tertiary
☐ National referral hospital

4.7 *Precancerous cervical lesion treatment services are actively provided as part of.*

Select all that apply:
☐ Routine preventative services for women
☐ Maternal child health services
☐ HIV services
☐ Special campaign for cervical cancer preventions
☐ Other arrangement (specify):

4.8 *How many health care facilities in your country provide treatment for precancerous cervical lesions?*

Total number of facilities:
☐ Data Not Available
Number of public (government) facilities:
☐ Data Not Available
Number of private facilities:
☐ Data Not Available
Number of other (e.g. NGO) facilities:
☐ Data Not Available
Data Year:
Data Source/s:

4.9 *Are cervical cancer screening and PCL treatment services provided as a Single Visit Approach?*

☐ Yes, all facilities that provide screening use a Single Visit Approach
☐ Yes, some facilities that provide screening use a Single Visit Approach
☐ No, there are no facilities providing screening using a Single Visit Approach

4.10 *Is there a standardized referral system in place for women who need:*

PCL Treatment (CIN 2 & 3)
☐ Yes ☐ No
Large lesions or suspected cervical cancer
☐ Yes ☐ No
Radical Hysterectomy
☐ Yes ☐ No

Radiation Therapy
☐ Yes ☐ No
Chemotherapy
☐ Yes ☐ No
Palliative Care
☐ Yes ☐ No

4.11 *What services are currently being provided for the diagnosis of precancerous cervical lesions or invasive cervical cancer?*

Select all that apply
☐ Colposcopy
☐ Biopsy
☐ Histology/Pathology
☐ Other (please specify):

4.12 *How many health care facilities in your country provide diagnostics for precancerous cervical lesions or invasive cervical cancer?*

Total number of facilities:
☐ Data Not Available
Number of public (government) facilities:
☐ Data Not Available
Number of private facilities:
☐ Data Not Available
Number of other (e.g. NGO) facilities:
☐ Data Not Available
Data Year:
Data Source/s:

4.13 *What services are currently being provided for the treatment and management of invasive cervical cancer?*

Select all that apply
☐ Simple hysterectomy
☐ Radical hysterectomy
☐ Chemotherapy
☐ Radiation therapy
☐ Intra-cavitary radiation therapy
☐ Other (please specify):

4.14 *At what health-care facility level is invasive cervical cancer treated in your country?*

☐ Primary ☐ Secondary ☐ Tertiary
☐ National referral hospital

4.15 *Are there cancer centres or speciality hospitals for cancer in your country?*

☐ Yes ☐ No
If Yes, please list the name and location for each
Name: Location:
Name: Location:

4.16 *How many health-care facilities in your country have the staffing and capacity to perform radical hysterectomies (removal of the uterus, cervix, a part of the vagina, and the pelvic lymph glands)?*

Total number of facilities:
☐ Data Not Available
Number of public (government) facilities:
☐ Data Not Available
Number of private facilities:
☐ Data Not Available
Number of other (e.g. NGO) facilities:
☐ Data Not Available
Data Year:
Data Source/s:

4.17 *How many health care facilities in your country have the capacity to provide chemotherapy?*

Total number of facilities:
☐ Data Not Available
Number of public (government) facilities:
☐ Data Not Available
Number of private facilities:
☐ Data Not Available
Number of other (e.g. NGO) facilities:
☐ Data Not Available
Data Year:
Data Source/s:

4.18 *How many health care facilities in your country provide radiation therapy?*

Total number of facilities:
☐ Data Not Available
Number of public (government) facilities:
☐ Data Not Available
Number of private facilities:
☐ Data Not Available
Number of other (e.g. NGO) facilities:
☐ Data Not Available
Data Year:
Data Source/s:

4.19 *How many health care facilities in your country provide intra-cavitary radiation therapy?*

Total number of facilities:
☐ Data Not Available
Number of public (government) facilities:
☐ Data Not Available
Number of private facilities:
☐ Data Not Available
Number of other (e.g. NGO) facilities:
☐ Data Not Available
Data Year:
Data Source/s:

SERVICE UTILIZATION

Data should reflect the total number of women receiving services nationally, within the last year for which data are available.

4.20 ***How many women are targeted nationally per year for cervical cancer screening?***

Number:
Data Year:
Data Source:
☐ Data Not Available

4.21 ***How many women received screening for cervical cancer?***

Number:
Data Year:
Data Source:
☐ Data Not Available

4.22 ***How many women received treatment for precancerous cervical lesions?***

Number:
Data Year:
Data Source:
☐ Data Not Available

4.23 ***How many women received diagnostic services for precancerous cervical lesions?***

Number:
Data Year:
Data Source:
☐ Data Not Available

4.24 ***How many women received diagnostic services for invasive cervical cancer?***

Number:
Data Year:
Data Source:
☐ Data Not Available

4.25 ***If you are using the International Federation of Gynecology and Obstetrics (FIGO) staging system, please provide the number of women diagnosed in each of the stages.***

If you are using another system, please provide the name of the system and provide the number for each stage.
☐ No staging system is used
☐ FIGO staging system
Stage I:
Stage II:
Stage IIA:
Stage IIB:
Stage III:
Stage IV:
☐ Other staging system
Stage and Number:
Stage and Number:
Stage and Number:
Stage and Number:
– Name: _____

☐ Data Not Available ☐ Data Not Available
Data Year:
Data Source:

4.26 ***How many invasive cervical cancer cases were treated/managed? Treatment and management services include surgery, radiation, chemotherapy, etc.***

Number:
Data Year:
Data Source:
☐ Data Not Available

4.27 ***How many women received radical hysterectomy for invasive cervical cancer? Radical hysterectomy is the removal of the uterus, cervix, a part of the vagina and the pelvic lymph glands.***

Please note that this IS NOT simple hysterectomy which is only removal of uterus and cervix.
☐ Radical Hysterectomy Not Available
Number:
Data Year:
Data Source:
☐ Data Not Available

4.28 ***How many women received chemotherapy for invasive cervical cancer? This includes adjuvant treatment or palliative chemotherapy for cervical cancer.***

☐ Chemotherapy Not Available
Number:
Data Year:
Data Source:
☐ Data Not Available

4.29 ***How many women received radiation therapy for invasive cervical cancer?***

☐ Radiation Therapy Not Available
Number:
Data Year:
Data Source:
☐ Data Not Available

4.30 ***How many women received intra-cavitary radiation for invasive cervical cancer?***

☐ Intra-cavitary Radiation Therapy Not Available
Number:
Data Year:
Data Source:
☐ Data Not Available

LANDSCAPE DOMAIN 5: HUMAN RESOURCES FOR HEALTH

The primary objective of this domain is to document the availability of health professionals to provide cervical cancer services, and the relevant training opportunities available. The secondary objectives are to determine whether aggregate data regarding cervical cancer service providers and health workforce training capacity are available and current; and to identify the sources of these data as a prerequisite to the next phase of data collection.

CADRES OF SERVICE PROVIDERS

5.1 *Who performs cervical cancer screening in your country?*

Select all that apply.
Screening includes PAP smears, Visual inspection with acetic acid (VIA), Visual inspection with Lugol's iodine (VILI), Human papillomavirus (HPV) DNA testing, etc.
☐ Obstetrician/gynecologist (Ob/gyn)
☐ General/Family Practitioner/ Internist
☐ Practitioner
☐ Mid-level practitioner (Clinical Officer)
☐ Midwives & Nurses
☐ Other: (specify):

5.2 *Who generally provides cryotherapy treatment for precancerous cervical lesions?*

Select all that apply.
☐ Ob/gyn
☐ General/Family Practitioner/ Internist
☐ Practitioner
☐ Mid-level practitioner (Clinical Officer)
☐ Midwives & Nurses
☐ Other: (specify):

5.3 *Who generally provides LEEP for the treatment of precancerous cervical lesions?*

Select all that apply
☐ Ob/gyn
☐ General/Family Practitioner/ Internist
☐ Practitioner
☐ Mid-level practitioner (Clinical Officer)
☐ Midwives & Nurses
☐ Other: (specify):

5.4 *Who generally provides conization or simple hysterectomy for the treatment of precancerous cervical lesions?*

Select all that apply
☐ Ob/gyn
☐ General/Family Practitioner/ Internist
☐ Practitioner
☐ Mid-level practitioner (Clinical Officer)
☐ Midwives & Nurses
☐ Surgeon
☐ Other: (specify):

5.5 *Who generally provides treatment for invasive cervical cancer?*

Select all that apply
☐ Ob/gyn
☐ General/Family Practitioner/ Internist
☐ Practitioner
☐ Mid-level practitioner (Clinical Officer)
☐ Midwives & Nurses
☐ Surgeon
☐ Other: (specify):

TRAINING OF SERVICE PROVIDERS

5.6 *Is there a national/regional strategy for training and capacity building for providers of cervical cancer services (screening and treatment of precancerous cervical lesions and invasive cervical cancer)?*

☐ Yes ☐ No

5.7 *Are formal opportunities available to obtain general medical or specialty training (e.g. residency, mMED, fellowship, oncology, radiation physics, cytotechnology etc.) outside of the country?*

☐ Yes ☐ No ☐ Don't Know

5.8 *How many medical schools do you have in your country?*

Total medical schools:
☐ Data Not Available
Number of public medical schools:
☐ Data Not Available
Number of private medical schools:
☐ Data Not Available
Data Year:
Data Source/s:

5.9 *How many nursing/midwifery schools do you currently have in your country?*

Total nursing midwifery schools:
☐ Data Not Available
Number of public nursing/midwifery schools:
☐ Data Not Available
Number of private nursing/midwifery schools:
☐ Data Not Available
Data Year:
Data Source/s:

5.10 ***How many of the following specialty training (residency, mMED, fellowship, certification, etc.) programmes do you have in your country?***

Reproductive Health (Obstetrics and Gynecology): ☐ Data Not Available
Gynecological-Oncology: ☐ Data Not Available
Surgery: ☐ Data Not Available
Anesthesiology: ☐ Data Not Available
Internal Medicine: ☐ Data Not Available
Medical Oncology: ☐ Data Not Available
Radiation Oncology: ☐ Data Not Available
Palliative Care: ☐ Data Not Available
Cytology: ☐ Data Not Available
Pathology ☐ Data Not Available
Radiology: ☐ Data Not Available
Data Year:
Data Source/s:

5.11 ***How many of the following training programmes for health professionals do you have in your country?***

Radiation technology: ☐ Data Not Available
Radiation physics: ☐ Data Not Available
Cytotechnologists: ☐ Data Not Available
Data Year:
Data Source/s:

AVAILABILITY OF SERVICE PROVIDERS

5.12 ***How many of the following public and private sector health-care professionals are currently providing health services. Individuals with multiple qualifications can be counted in each category for which they are qualified.***

Ob/Gyn: ☐ Data Not Available
Surgeons: ☐ Data Not Available
Anaesthesiologists: ☐ Data Not Available
Gyn Oncologists: ☐ Data Not Available
Surgeons trained in radical pelvic surgery cancer: ☐ Data Not Available
Radiation Oncologists: ☐ Data Not Available
Medical Oncologists: ☐ Data Not Available
Physicians providing palliative Care: ☐ Data Not Available
Data Year:
Data Source/s:

5.13 ***In each category below, how many health-care professionals are providing cervical cancer screening in your country?***

Ob/Gyn: ☐ Data Not Available
General/Family practitioner/Internist: ☐ Data Not Available
Mid-level practitioner (clinical officer): ☐ Data Not Available
Midwives & Nurses: ☐ Data Not Available
Others: (specify): ☐ Data Not Available
Data Year:
Data Source/s:

5.14 ***In each category below, how many health-care professionals provide PCL treatment with cryotherapy?***

Ob/Gyn: ☐ Data Not Available
General/Family practitioner/Internist: ☐ Data Not Available
Mid-level practitioner (clinical officer): ☐ Data Not Available
Midwives & Nurses: ☐ Data Not Available
Others: (specify): ☐ Data Not Available
Data Year:
Data Source/s:

5.15 ***In each category below, how many health care professionals provide PCL treatment with LEEP?***

Ob/Gyn: ☐ Data Not Available
General/Family practitioner/Internist: ☐ Data Not Available
Mid-level practitioner (clinical officer): ☐ Data Not Available
Midwives & Nurses: ☐ Data Not Available
Others: (specify): ☐ Data Not Available
Data Year:
Data Source/s:

5.16 ***In each category below, how many health care professionals are providing treatment for PCL with conization or simple hysterectomy?***

Ob/Gyn: ☐ Data Not Available
General/Family practitioner/Internist: ☐ Data Not Available
Mid-level practitioner (clinical officer): ☐ Data Not Available
Midwives & Nurses: ☐ Data Not Available
Others: (specify): ☐ Data Not Available
Data Year:
Data Source/s:

5.17 ***In each category below, how many health care professionals are providing care for patients with invasive cervical cancer in your country?***

Ob/Gyn: ☐ Data Not Available
General/Family practitioner/Internist: ☐ Data Not Available
Mid-level practitioner (clinical officer): ☐ Data Not Available
Midwives & Nurses: ☐ Data Not Available
Others: (specify): ☐ Data Not Available
Data Year:
Data Source/s:

LANDSCAPE DOMAIN 6: EQUIPMENT, SUPPLIES AND MEDICINES

The primary objective of this domain is to gather information on the availability of basic equipment, supplies and medicines necessary to provide quality cervical cancer services. The secondary objective is to document the associated systems and processes as a prerequisite to the next phase of data collection. NOTE: Additional information specific to procurement and supply chain for laboratories is collected under DOMAIN 7: LABORATORY.

AVAILABILITY OF ESSENTIAL SUPPLIES, MEDICINES AND EQUIPMENT

6.1 *Are the minimum necessary cervical cancer screening supplies (e.g. 3-5% acetic acid, Lugol's iodine, Pap smear kit, HPV kit, etc.) on the national essential supply list?*

☐ Yes – all minimum
☐ Yes – some minimum (please list):
☐ None
☐ No essential supply list
Where available, please provide copy of the essential supply list as an attachment or a URL to an online soft copy.

6.2 *Are the following cervical cancer screening supplies available?*

3-5% acetic acid:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A
Lugol's iodine:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A
Pap smear supplies:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A
HPV test supplies:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A
Specula:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A

6.3 *Which supply's availability presents the greatest barrier to providing effective cervical cancer screening?*

Select one best answer
☐ 3-5% acetic acid ☐ Lugol's iodine
☐ Pap smear supplies ☐ HPV test supplies
☐ Specula ☐ Other (specify):

6.4 *Are the following equipment and supplies for PCL treatment available?*

Cryotherapy machines:
☐ Yes ☐ Yes – only at higher level facilities ☐ No
Electro-cautery machines for LEEP:
☐ Yes ☐ Yes – only at higher level facilities ☐ No
Monsel / Silver Nitrate:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A
Liquid Nitrogen / Carbon Dioxide Gas:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A
Cryotips:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A
Loops for LEEP:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ N/A

6.5 *Which equipment or supply's availability presents the greatest barrier to providing effective treatment of precancerous cervical lesions?*

Select one best answer
☐ Cryotherapy machines
☐ Electro-cautery machines for LEEP
☐ Monsel / Silver Nitrate
☐ Liquid nitrogen / Carbon Dioxide Gas
☐ Cryotips
☐ Loops for LEEP
☐ Other (specify):

6.6 *Are any chemotherapeutic agents on the essential medication list for your country?*

☐ Yes ☐ No ☐ No essential medication list

6.7 *Are the following chemotherapeutic agents available to treat invasive cervical cancer?*

Cis-Platinum:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ Never
Paclitaxel:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ Never
Topotecan:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ Never
Gemcitabine:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ Never
Other Drug (specify):
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ Never

6.8 *Are opiate pain medications available for patients with invasive cervical cancer? (e.g. Morphine, Dihydrocodeine, fentanyl, methadone)*

For inpatients:
☐ Always available ☐ Infrequent stockouts

☐ Frequent stockouts ☐ Never
By prescription:
☐ Always available ☐ Infrequent stockouts
☐ Frequent stockouts ☐ Never

6.9 *How many radiation oncology machines are currently operational nationally?*

Number in ALL facilities: ☐ Data Not Available
Number in public (government) facilities: ☐ Data Not Available
Number in private facilities: ☐ Data Not Available
Number in other (e.g. NGO) facilities: ☐ Data Not Available
Data Year:
Data Source/s:

PROCUREMENT AND SUPPLY CHAIN

6.10 *Does the government/MOH procure and manage the inventory of supplies for cervical cancer screening (specifically or as part of a broader role in supply, procurement and management)?*

☐ Yes – at central level
☐ Yes – at subnational level
☐ No
If No, what institution/organization is responsible for procuring and distributing supplies for cervical cancer screening within the country?
Institution Name:

6.11 *What electronic system is used to procure and distribute supplies for cervical cancer screening (specifically or as part of a broader role in supply, procurement and management)?*

Name Of System:
Organizations Using the System (list as many as possible):
Organization that Developed and Maintains the System:
☐ No electronic system available

6.12 *Does the government/MOH procure and manage the inventory of supplies for PCL treatment (specifically or as part of a broader role in supply procurement and management)?*

☐ Yes – at central level
☐ Yes – at subnational level
☐ No
If No, what institution/organization is responsible for procuring and distributing supplies for PCL treatment?
Institution Name:

6.13 *What electronic system is used to procure and distribute supplies for PCL treatment (specifically or as part of a broader role in supply, procurement and management)?*

Name Of System:
Organizations Using the System (list as many as possible):
Organization that Developed and Maintains the System:
☐ No electronic system available

6.14 *Does the government/MOH procure and manage the inventory for chemotherapeutic agents (specifically or as part of a broader role)?*

☐ Yes – at central level
☐ Yes – at subnational level
☐ No
If No, what institution/organization is responsible for procuring and distributing chemotherapeutic agents?
Institution Name:

6.15 *What electronic system is used to track the inventory of chemotherapeutic agents (specifically or as part of a broader role in supply, procurement and management)?*

Name Of System:
Organizations Using the System (list as many as possible):
Organization that Developed and Maintains the System:
☐ No electronic system available

LANDSCAPE DOMAIN 7: LABORATORY

The primary objective of this domain is to document the laboratory landscape and describe the services and linkages relevant to cervical cancer prevention and control services. The secondary objectives are to determine the availability of key data for cervical cancer patient and programme monitoring; and to identify the systems and processes for the collection and management of these data as a prerequisite to the next phase of data collection.

GENERAL ORGANIZATION AND MANAGEMENT

7.1 *Is there a national policy plan or strategy for laboratory development and management?*

☐ Yes ☐ No

7.2 *Is there a national plan or strategy for laboratory accreditation and/or quality and performance management (separate from the above)?*

☐ Yes – part of national laboratory development policy, strategy or plan
☐ Yes – separate from national laboratory development policy, strategy or plan
☐ No

7.3 *Is the laboratory system centralized?*

☐ Yes – at national level
☐ Yes – at subnational/regional level
☐ No

7.4 *Is there a national reference laboratory?*

☐ Yes ☐ No
Name of Laboratory:
Location:

SERVICE AVAILABILITY AND QUALITY ASSURANCE

7.5 *How many laboratories offer pathology services (including cytopathology and histopathology for cervical cancer screening and diagnosis)? How many are accredited (or have met quality assurance or performance evaluation requirements)?*

Total number of public and private pathology laboratories: ☐ Data Not Available
· Number offering cytopathology: ☐ Data Not Available
- For cervical samples:
- Number Accredited: ☐ No accreditation or quality assurance process
· Number offering histopathology: ☐ Data Not Available
- For cervical samples:
- Number Accredited: ☐ No accreditation or quality assurance process
Total Number of private pathology laboratories: ☐ Data Not Available
· Number offering cytopathology: ☐ Data Not Available
- For cervical samples:
- Number Accredited: ☐ No accreditation or quality assurance process
· Number offering histopathology: ☐ Data Not Available
- For cervical samples:
- Number Accredited: ☐ No accreditation or quality assurance process
Total number of public pathology laboratories: ☐ Data Not Available
· Number offering cytopathology: ☐ Data Not Available
- For cervical samples:
- Number Accredited: ☐ No accreditation or quality assurance process
· Number offering histopathology: ☐ Data Not Available
- For cervical samples:
- Number Accredited: ☐ No accreditation or quality assurance process
Data Year:
Data Source/s:

7.6 *How many of the following public and private sector laboratory professionals are currently providing services. Individuals with multiple qualifications can be counted in each category for which they are qualified.*

Number of Cytotechnologists:
☐ Data Not Available
Total Number of Pathologists:
☐ Data Not Available
Number of Cytopathologists:
☐ Data Not Available
Number of Histopathologists:
☐ Data Not Available
Data Year:
Data Source/s:

7.7 *How many laboratories provide HPV testing services? How many are accredited (or have met quality assurance or performance evaluation requirements)?*

Total number of laboratories providing HPV testing:
☐ Data Not Available
Number Accredited:
☐ No accreditation or quality assurance process
Number of private laboratories providing HPV testing
☐ Data Not Available
Number Accredited:
☐ No accreditation or quality assurance process
Number of public laboratories providing HPV testing:
☐ Data Not Available
Number Accredited:
☐ No accreditation or quality assurance process
Data Year:
Data Source/s:

PROCUREMENT AND SUPPLY CHAIN

7.8 *Does the government/MOH procure and manage laboratory supplies for cervical cancer diagnosis (specifically or as part of a broader role in laboratory supply procurement and management)?*

☐ Yes – at central level
☐ Yes – at subnational level
☐ No
If No, what institution/organization is responsible for

procuring and distributing laboratory supplies for cervical cancer diagnosis?
Institution Name:
Institution Contact:

7.9 *Is there a system used to procure and manage laboratory supplies for cervical cancer diagnosis (specifically or as part of a broader role in medication/drug procurement and management)?*

☐ Yes – electronic system
☐ Yes – paper-based system
☐ No
Name of System:
Organizations Using the System:
Organization that Developed
and Maintains the System:

LABORATORY RESULTS

7.10 *Do all labs report cytology/cytopathology results according to a standard terminology (e.g. Bethesda)?*

☐ Yes ☐ No
Standard Used:

7.11 *Are cervical cytology/cytopathology results entered into a national laboratory information system?*

☐ Yes – electronic system
☐ Yes – paper-based system
☐ No
Name of System:
Organizations Using the System:
Organization that Developed
and Maintains the System:

7.12 *Do all labs report cervical histology/ histopathology results according to a standard terminology (e.g. SIL)?*

☐ Yes ☐ No
Standard Used:

7.13 *Are cervical biopsy results entered into a national laboratory information system?*

☐ Yes – electronic system
☐ Yes – paper-based system
☐ No
Name of System:
Organizations Using the System:
Organization that Developed and Maintains the System:

7.14 *Are HPV test results entered into a national laboratory information system?*

☐ Yes – electronic system
☐ Yes – paper-based system
☐ No
Name of System:
Organizations Using the System:
Organization that Developed and Maintains the System:

LANDSCAPE DOMAIN 8: FINANCING, BUDGET AND COSTING

The primary objective of this domain is to describe the financing and budget for cervical cancer services and programming. The secondary objective is to determine the availability and use of data, structures and processes for cervical cancer programme budgeting and costing.

PROGRAMME AND SERVICE PROVISION

8.1 *What are the sources of funding for cervical cancer prevention and control service provision?*
Select all that apply

☐ Central Government/Ministry
☐ Private donors
☐ Multilateral agencies
☐ NGOs
☐ Individual programmes
☐ Patient fees
☐ Other (Specify):
If more than one response is selected, what is the primary source of funding (select one)?
☐ Central Government/Ministry
☐ Private donors
☐ Multilateral agencies
☐ NGOs
☐ Individual programmes
☐ Patient fees
☐ Other (Specify):

8.2 *Is there a dedicated budget for cervical cancer prevention and control?*

☐ Yes ☐ No

8.3 *Is there a section, unit or team dedicated to cervical cancer programme budget planning and costing?*

☐ Yes – at central level
☐ Yes – at subnational level
☐ No
If Yes, Section, Unit or Team Name:
If No, what department or section is responsible for cervical cancer budgeting and costing?
Department or Section Name:

8.4 *Is there a system or tool used for cervical cancer programme budget planning and costing?*

☐ Yes – electronic system
☐ Yes – paper-based system
☐ No
Name of System:
Organizations Using the System:
Organization that Developed and Maintains the System:

8.5 *Are line item costs available for cervical cancer supplies and commodities?*

☐ All line item costs available
☐ Most line item costs available
☐ Limited line item costs available
☐ Line item costs not available

8.6 *Are the following costs for individual cervical cancer prevention and control services readily available?*

☐ Cost of screening one woman for cervical cancer
☐ Cost of treating one woman for precancerous cervical lesion
☐ Cost of treating one woman for invasive cervical cancer
☐ Costs of services per woman are not available

HUMAN RESOURCES AND CAPACITY BUILDING

8.7 *Is there a salary structure for government health personnel (including benefits)?*

☐ Yes ☐ No
If Yes, please provide the name of the document(s)/ upload the document(s) where this salary structure can be found.

8.8 *What are the sources of funding for health workforce training and capacity building – including medical and nursing schools, continuing education, etc.?*

Select all that apply
☐ Central Government/Ministry
☐ Private donors
☐ Multilateral agencies
☐ NGOs
☐ Faith-based organizations
☐ Student fees
☐ Private public partnerships
☐ Other (Specify):
If more than one response is selected, what is the primary source of funding? Select one
☐ Central Government/Ministry
☐ Private donors
☐ Multilateral agencies
☐ NGOs
☐ Faith-based organizations
☐ Student fees
☐ Private public partnerships
☐ Other (Specify):

8.9 *What are the sources of funding for cervical cancer prevention and control provider training and capacity building?* Select all that apply

☐ Central Government/Ministry
☐ Private donors
☐ Multilateral agencies
☐ NGOs
☐ Individual programmes
☐ Student fees
☐ Private public partnerships
☐ Other (Specify):
If more than one response is selected, what is the primary source of funding? Select one
☐ Central Government/Ministry
☐ Private donors
☐ Multilateral agencies
☐ NGOs
☐ Individual programmes
☐ Student fees
☐ Private public partnerships
☐ Other (Specify):

LANDSCAPE DOMAIN 9: HEALTH INFORMATION SYSTEMS OVERVIEW

The primary objectives of this domain are to document the health information systems context in which cervical cancer programming operates; and to identify structures, systems and processes for the collection, management, analysis and use of client level and aggregate health data for patient and programme monitoring. The secondary objective is to identify preliminary Opportunities and Threats in the health information system landscape and preliminary Strengths and Weaknesses in the systems and processes relevant to cervical cancer data.

NOTE: Additional information specific to systems for managing procurement and supply chain is collected under DOMAIN 6: PROCUREMENT AND SUPPLY CHAIN and DOMAIN 7: LABORATORY.

POLICIES, PLANS AND STRATEGIES

9.1 *Is there a national policy, plan or strategy for Information and Communication Technologies (ICTs)?*

☐ Yes ☐ No

9.2 *Is there a national policy, plan or strategy for eHealth?*

☐ Yes ☐ No

9.3 *Does a national monitoring and evaluation plan exist for cervical cancer prevention and control?*

This plan may be standalone or may be integrated within other plans, such as the Cervical Cancer Strategic Plan
☐ Yes – standalone plan
☐ Yes – integrated within other plan (specify):
☐ No

COORDINATION, MANAGEMENT AND GOVERNANCE

9.4 *Is there a government ministry, department or section dedicated to Information and Communication Technologies (ICTs)?*

☐ Yes ☐ No
If Yes, what is the name of the ministry, department or section?
Ministry, Department or Section Name:
If No, what ministry, department or section has authority over national ICT policies, planning and programming?
Ministry, Department or Section Name:

9.5 *Is there a government section, unit or team dedicated to eHealth?*

☐ Yes ☐ No
If Yes, what is the name of the section, unit or team?
Section, Unit or Team Name:
If No, what section, unit or team has authority over national eHealth policies, planning and programming?
Ministry, Department or Section Name:

9.6 *Who is responsible for financing and budgeting for the development and maintenance of electronic information systems for health (including cervical cancer)?*

Select all that apply
☐ Central Government/Ministry
☐ Private donors
☐ Multilateral agencies
☐ NGOs
☐ Individual programmes
☐ Other (Specify):

9.7 *Is there a section, unit or team within the MoH dedicated to Monitoring and Evaluation (M&E) for cervical cancer prevention and control?*

☐ Yes ☐ No
If Yes, what is the name of the section, unit or team and the department that it sits within?
Section, Unit or Team Name:
Dept. Name:
If No, what section, unit or team is responsible for M&E for cervical cancer prevention and control?
Section, Unit or Team Name:
Dept. Name:

9.8 *Are there budgetary funds specifically dedicated to M&E for cervical cancer prevention and control?*

☐ Yes ☐ No

9.9 *Are there institutions or organizations outside of the MoH that are conducting M&E for cervical cancer prevention and control?*

☐ Yes ☐ No
If Yes, please provide Institution Name:
Institution Name(s):

HUMAN RESOURCES

9.10 *What is the number of trained individuals who work on cervical cancer data related issues and systems? How many have 100% of their work time dedicated to cervical cancer?*

Personnel trained in M&E:
100% time on cervical cancer:
Data management personnel
(includes data entry and analysis):
100% time on cervical cancer:
System developers:
100% time on cervical cancer:
IT support staff:
☐ Data Not Available
100% time on cervical cancer:
☐ Data Not Available
Data Year:
Data Source/s:

DATA COLLECTION AND AGGREGATION SYSTEMS

Cross-reference data sources for Domain 4: Service Availability and Utilization; and Domain 7: Laboratory

9.11 *What electronic systems are used for collecting and managing individual client level data for health-care services within the country?*

Systems may collect comprehensive health-care data for individual clients or individual client data for a specific disease or health programme (e.g. electronic medical records, electronic health records, mobile health systems, etc.); or they may be systems collecting limited data for individual clients receiving specific services (e.g. Laboratory or Pharmacy Information Systems).
☐ No electronic systems used for collecting individual client level data
Please list all systems, with the information below for each:
1. Name of system:
Organizations Using the System (list as many as possible):
Organization that Developed the System:
Type of Data Collected:
☐ Comprehensive health-care

☐ Disease- or programme-specific (specify disease or programme):
☐ Service-specific (specify service):
Are any data related to cervical cancer prevention and control collected?
☐ Yes ☐ No
2. Name of system:
Organizations Using the System (list as many as possible):
Organization that Developed the System:
Type of Data Collected:
☐ Comprehensive health-care
☐ Disease- or programme-specific (specify disease or programme):
☐ Service-specific (specify service):
Are any data related to cervical cancer prevention and control collected?
☐ Yes ☐ No
3. Name of system:
Organizations Using the System (list as many as possible):
Organization that Developed the System:
Type of Data Collected:
☐ Comprehensive health-care
☐ Disease- or programme-specific (specify disease or programme):
☐ Service-specific (specify service):
Are any data related to cervical cancer prevention and control collected?
☐ Yes ☐ No

9.12 *How are individual client level data for cervical cancer prevention and control collected?*

☐ Exclusively through paper-based forms
☐ Exclusively through electronic systems
☐ Combination of paper-based and electronic systems

9.13 *What patient identification number or code is used on data collection forms or in electronic systems to uniquely identify clients attending health services?* Select all that apply

☐ Unique national ID number or code
☐ Unique national client health ID number or code
☐ Unique ID number or code assigned to clients attending specific services or programmes (i.e. disease-specific unique identifier)
☐ Each individual facility assigns an ID number or code to an individual client at their first visit
☐ Each facility assigns a new ID number or code to an individual client at every visit
☐ No use of ID numbers or codes to identify individual clients

9.14 *What patient identification number or code is used on data collection forms or in electronic systems to uniquely identify clients attending cervical cancer prevention and control services?* Select all that apply

☐ Unique national ID number or code
☐ Unique national client health ID number or code
☐ Unique ID number or code assigned to clients attending specific services or programmes (i.e. disease-specific unique identifier)
☐ Each facility assigns an ID number or code to an individual client at their first visit
☐ Each facility assigns a new ID number or code to an individual client at every visit
☐ No use of ID numbers or codes to identify individual clients attending cervical cancer prevention and control services

9.15 *Is there an electronic system used to aggregate health-care data and calculate indicators for monitoring?*

1. Name of system:
Organizations Using the System (list as many as possible):
Organization that Developed the System:
Type of Data Collected:
☐ Comprehensive health-care
☐ Disease- or programme-specific (specify disease or programme):
☐ Service-specific (specify service):
Are any data related to cervical cancer prevention and control collected?
☐ Yes ☐ No
2. Name of system:
Organizations Using the System (list as many as possible):
Organization that Developed the System:
Type of Data Collected:
Comprehensive health-care
☐ Disease- or programme-specific (specify disease or programme):
☐ Service-specific (specify service):
Are any data related to cervical cancer prevention and control collected?
☐ Yes ☐ No
3. Name of system:
Organizations Using the System (list as many as possible):
Organization that Developed the System:
Type of Data Collected:
☐ Comprehensive health-care
☐ Disease- or programme-specific (specify disease or programme):
☐ Service-specific (specify service):
Are any data related to cervical cancer prevention and control collected?
☐ Yes ☐ No

9.16 *How are data for cervical cancer prevention and control aggregated and reported?*

☐ Exclusively aggregated manually and reported on paper-based forms
☐ Exclusively aggregated and reported electronically
☐ Combination of paper-based and electronic aggregation and reporting

9.17 *Are there standardized national indicators for cervical cancer prevention and control?*

☐ Yes ☐ No
If Yes, please provide a list of standardized indicators.
If No, are there institutions or organizations within the country that have established indicators for cervical cancer prevention and control?
☐ Yes ☐ No
If Yes, please provide institution name:
Institution Name(s):
Contact:

9.18 *For high HIV prevalence contexts: Are there standardized national indicators for cervical cancer prevention and control that are specifically linked to HIV status?*

☐ Yes ☐ No
If No, are there institutions or organizations within your country that have established indicators for cervical cancer prevention and control that are specifically linked to HIV status?
☐ Yes ☐ No
Institution Name(s):
Contact:

EVALUATIONS AND AUDITS

9.19 *Have there been any evaluations or assessments of health information systems within the past 10 years?*

Please list all
☐ Yes, Conducted by:
Year conducted:
☐ No

9.20 *Have there been any evaluations or assessments of the cervical cancer programme within the past 10 years?*

Please list all.
☐ Yes, Conducted by:
Year conducted:
☐ No
If Yes, did the programme evaluation or assessment include an audit or assessment of cervical cancer data and data systems?
☐ Yes ☐ No

DECISION AND REFERRAL SUPPORT SYSTEMS

9.21 *Which of the following are being used in clinical consultation and/or client referrals in the health-care system?*

☐ Real-time telephone based
☐ Telemedicine-based
☐ Paper/letter-based
☐ Mobile based store-and-forward systems
☐ Other (specify):
☐ None of these
Which systems are used for cervical cancer consultation and referrals?
☐ Real-time telephone based
☐ Telemedicine-based
☐ Paper/letter-based
☐ Mobile based store-and-forward systems
☐ Other (specify):
☐ None of these

9.22 *Which of the following decision support systems are being used in health-service delivery?*

☐ Electronic client-level
☐ Manual client-level
☐ Electronic or real-time M&E
☐ Manual M&E
☐ Electronic inventory management (includes pharmacy and laboratory)
☐ Manual inventory management (includes pharmacy and laboratory)
☐ Other (specify):
☐ None of these
Which systems are used in cervical cancer service delivery?
☐ Electronic client-level
☐ Manual client-level
☐ Electronic M&E or real-time
☐ Manual M&E
☐ Electronic inventory management (includes pharmacy and laboratory)
☐ Manual inventory management (includes pharmacy and laboratory)
☐ Other (specify):
☐ None of these

IN-DEPTH DISCUSSION GUIDE

DOMAIN 1: DEMOGRAPHICS AND EPIDEMIOLOGY

Data System Themes:
Systems and Processes (demographic, mortality, surveillance and epidemiological data); Health Information Exchange; Data Quality; Data Access and Use

REVIEW LANDSCAPE SURVEY QUESTIONS 1.1–1.11

For each subset (demographics, mortality and vital statistics, HIV epidemiology, and cervical cancer epidemiology) where data are available, ask the following questions:

1.1 *What are the structures and processes to obtain and report data on population demographics, mortality and vital statistics, HIV epidemiology, and cervical cancer epidemiology?*

Probes:

- What are the sources of these data and how are the reported numbers derived?
- How are the data aggregated and analysed? Are paper-based or electronic systems (or registries) in use? What is the system name, what entity maintains it, and who are the users?
- Are there guidelines for reporting data into the system (or registry)? What data quality checks are in place for these data?
- What is the quality of these data in terms of the following six dimensions: Completeness; Conformity; Accuracy; Duplication; Integrity; and Timeliness?
- Are the systems integrated or linked to any other systems (e.g. system for vital registration linked to the cancer registry; cancer registry linked to health management information system)?

1.2 *How and by whom have these data been used in the past 12 months?*

Probes:

- Used for programme planning, development or improvement?
- Used for policy development or modification?
- Used to determine resource allocation? Or for the development of a grant?
- Used to produce an internal or external report or presentation? Used to produce a peer reviewed article?

For each subset where data are available but are NOT current, ask the following question (in addition to the questions above):

1.3 *What are the barriers to collecting or obtaining current data on population demographics, mortality and vital statistics, HIV epidemiology, and cervical cancer epidemiology?*

Probes:

- Is this an issue of data accessibility or availability?
- If an issue of access, who currently has access to these data? What is the process to expand access?
- If an issue of availability, are there other systems or processes that could potentially be leveraged to collect more current data?
- Is timeliness impacted by availability of resources to collect and manage these data?

For each subset where data are NOT available, investigate further by asking:

1.4 *Why are these data not available?*

Probes:

- Is this an issue of access or availability?
- Are there systems and processes in place to provide specific programmes with the necessary epidemiological and surveillance data for planning, management and targeting?
- What data and systems are other programmes using for planning, monitoring, and determining impact?

Data System Themes:
Systems and Processes (population-based surveys; cancer registries); Policies, Plans and Guidelines; Health Information Exchange; Data Quality; Data Access and Use

REVIEW LANDSCAPE SURVEY QUESTIONS 1.12–1.16

1.5 *Please describe any other registries, systems and sources of surveillance or epidemiological data relevant to cervical cancer which were not described above.*

Probes:

- Are there routinely conducted population-based surveys (e.g. DHS, PHIA, STEPS, etc.)?
- Are there surveys to collect: mortality data? HIV data? Cervical cancer data/information? When was the last survey and when will the next survey be?

- Where there is a cancer registry, is it paper-based or electronic? Are there guidelines for reporting invasive cervical cancer data? Are there guidelines for monitoring and quality control of the data?
- Where there is a cervical cancer screening and precancerous lesion treatment registry, is it paper-based or electronic? Are there guidelines for reporting? Are there guidelines for monitoring and quality control of the data?
- Where there is a registry capturing HPV immunization, is it paper-based or electronic? Are there guidelines for reporting? Are there guidelines for monitoring and quality control of the data?
- Who reports into the systems, who has access to the data and how have the data been used in the past 12 months?
- Are these systems integrated with or linked to any other systems? Can information readily be shared between systems? Please describe the process.
- What is the quality of these data?

DOMAIN 2: GOVERNANCE, MANAGEMENT AND INFRASTRUCTURE

Data System Themes:
Context; Infrastructure

REVIEW LANDSCAPE SURVEY QUESTIONS 2.1–2.3

Where information and data on infrastructure are available, ask the following:

2.1 *How is the health-care sector addressed and prioritized in government structures for delivering basic infrastructure and telecommunications, and ensuring government effectiveness?*

Probes:

- Does the basic framework include infrastructure specific to health-care service provision? What are some gaps in this infrastructure? What, if any, efforts are in place to strengthen these domains?
- What is the percentage of facilities with access to basic infrastructure domains (e.g. electricity and water) and telecommunications technology? What efforts, if any, are in place to strengthen these domains?
- Are there key examples in the health-care sector of leveraging available ICT for programming (e.g. data collection and management, patient follow-up, etc.)?

Where information and data on infrastructure are NOT available, ask the following:

2.2 *What are some of the largest gaps experienced by the health-care sector in terms of basic infrastructure (e.g. electricity and water) and telecommunications (e.g. telephones and mobile networks, computers and internet)?*

Probes:

- Are there certain health-care system levels with better access to basic infrastructure and telecommunications? Do private or NGO facilities typically have better access than government/public facilities?
- Is there political will behind prioritizing delivery of basic infrastructure and telecommunications elements to the health-care sector?
- Are there key examples in the health-care sector of leveraging available ICT for programming (e.g. data collection and management, patient follow-up, etc.)?

NOTE: Landscape Survey questions 9.4–9.7; 9.9; 9.13 and Discussion Guide questions 9.4 and 9.7 collect expanded information on Coordination, Management and Governance of information technology and cervical cancer data systems.

Data System Themes:
Context; Governance, Management and Coordination

REVIEW LANDSCAPE SURVEY QUESTIONS 2.4–2.6

Where there is an organizational structure for national health-care governance, ask the following:

2.3 *Are there any key strengths or weaknesses in general health care or cervical cancer service delivery or programming as a result of the health-care governance structure?*

Probes:

- Has this structure recently changed or been adapted? What impact did this have on service provision and access to health-care services?
- Is there a different ministry/department that oversees health care financing? Human resources for health? Information technology for health?
- Do the different ministries/departments that oversee health care and information technology have standing coordination meetings, working groups or other collaborative opportunities?

Where there is NOT an organizational structure for national health-care governance, ask the following:

2.4 *Please describe how health care is provided.*

Probes:

- Are there specific organizations, institutions or agencies responsible for providing health services? Are they private (for-profit)? Do they provide health care to the entire country, or only to specific subnational areas?
- Who is responsible for health-care financing and the provision of basic health-care infrastructure?
- What is the relationship between any entities providing health services, health-care infrastructure or financing and the government?

Data System Themes:
Context; Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 2.7–2.13

2.5 *Please describe the organization and management of cervical cancer prevention and control activities (HPV vaccination, screening, PCL treatment, and invasive cervical cancer) within the MoH. If an organogram is available, please provide a copy.*

Probes:

- How many units/depts. have authority over cervical cancer activities?
- Do the units/depts. also have authority over other disease areas? What areas?
- Are there staff dedicated specifically to cervical cancer at the department, section, unit, or programme level? Is this number of staff sufficient?
- What decisions regarding cervical cancer prevention and control programming are made at the centralized National level? Subnational level? Programme level?
- In high HIV prevalence contexts: What is the level of integration between cervical cancer prevention and control and HIV programming?

2.6 *Please describe the level of interaction between different programmes/units and other stakeholders.*

Probes:

- How do the cervical cancer screening and PCL treatment and invasive cervical cancer management programmes communicate with one another (e.g. regular meetings/forums)?
- Are data routinely exchanged between different sections/units? If applicable, are data exchanged with the HIV programme?
- What is the level of interaction between cervical cancer prevention, screening, invasive cervical cancer management programmes and units or departments responsible for Health Information Systems and ICT?
- Is there a national stakeholder forum for cervical cancer (prevention screening, or treatment)? Are any of the stakeholders designing or supporting systems for data collection around cervical cancer?

Data System Themes:
All Themes

REVIEW LANDSCAPE SURVEY QUESTION 2.14

2.7 *For each organization, agency or institution outside of the government with responsibility for cervical cancer, use the Exemplar Programme Discussion Guide to conduct in-depth interviews with key contacts.*

DOMAIN 3: POLICIES, PLANS, STRATEGIES AND CLINICAL GUIDELINES

Data System Themes:
Context; Policies, Plans, Strategies and Reporting Guidelines; Governance, Management and Coordination

REVIEW LANDSCAPE SURVEY QUESTIONS 3.1–3.8

NOTE: Landscape Survey questions 9.3, 9.13–9.16 and Discussion Guide question 9.5 collect expanded information on contents of the M&E plan for cervical cancer prevention and control.

3.1 *Please describe the policies, plans and strategies that govern cervical cancer prevention and control.*

Probes:

- How many different policies, plans or strategies govern cervical cancer prevention and control? What is the level of integration between screening and PCL treatment and invasive cervical cancer?
- Have the plans or strategies been fully costed?
- How widely are the policies, plans and strategies disseminated?
- Does service provision at all levels follow the policies, plans and strategies? In private facilities as well?
- What is the scope of recommendations in the policies, plans and strategies? Are they detailed enough to offer appropriate guidance for service provision?
- Who is responsible for drafting and updating plans or policies? Please briefly describe the process.
- Do any of the plans or strategies include a monitoring and evaluation plan?

3.2 *Please describe the clinical practice guidelines for cervical cancer prevention and control services (screening, PCL treatment, diagnostics, invasive cervical cancer treatment and management).*

Probes:

- How many different clinical practice guidelines are endorsed by MoH for cervical cancer prevention and control services? What is the level of integration between screening and PCL treatment and invasive cervical cancer?
- Are there clinical practice guidelines which address HIV?
- Are the guidelines developed at the National level? Subnational level? Programme/facility level? Partner level? What department, section or unit is responsible for updating and drafting the guidelines?
- How widely are the guidelines disseminated?
- Does service provision at all levels follow the guidelines? In private facilities as well?
- Are the guidelines detailed enough to guide service provision?
- If clinical practice guidelines do not exist, how do providers make decisions about patient care (e.g. are there other supportive resources that are in use)?

DOMAIN 4: SERVICE AVAILABILITY AND UTILIZATION

Note: Cross-reference Landscape Survey Questions 3.4 and 3.5 for information on services outlined in cervical cancer prevention and control policies, plans or strategies

Data System Themes:
Context

REVIEW LANDSCAPE SURVEY QUESTIONS 4.1–4.19

4.1 *Please describe the availability and general status of programmes and services for cervical cancer screening and precancerous lesion treatment?*

Probes:

- What are the screening and PCL treatment services offered (national and subnational)? Are these the same as outlined in national policies, plans or strategies?
- Are screening and PCL treatment services available through mobile units? Are these units tied to specific facilities or programs?
- Are the services designated to be provided at each health care facility level provided with regularity and without interruption?
- Are there a sufficient number of facilities providing services to meet population needs?
- What type of service/location of service provision is the most accessible to women seeking services (e.g. at a facility, mobile unit, or campaign)?
- How does private facility service availability and provision differ from the public sector (e.g. Do private facilities use Pap smear, and public use VIA? Is it mostly public facilities that offer mobile services?)

4.2 *Please describe the availability and general status of programmes and services for the management and treatment of invasive cervical cancer?*

Probes:

- What services are offered for the management and treatment of invasive cervical cancer (national and subnational)?
- What services are offered by cancer centres/specialty cancer hospitals? How are the specialty centres distributed geographically? What are plans for such hospitals/centres in the future (e.g. are additional specialty centres planned?)?
- Are the services designated to be provided at each facility level provided with regularity and limited interruption?
- Are there a sufficient number of facilities providing services to meet population needs?
- What health facility level is the most accessible to women seeking services (if more than one level offers these services)?
- How does private facility service availability and provision differ from the public sector (e.g. Do private facilities offer radiation, and public only offer chemotherapy?)? Is there any integration between public and private services provision for invasive cervical cancer?

Data System Themes:
Systems and Processes (service availability data; health facility registry/census); Governance, Management and Coordination; Health Information Exchange; Data Quality; Data Access and Use

REVIEW LANDSCAPE SURVEY QUESTIONS 4.4; 4.8; 4.12; and 4.16–4.19

Where data are available, ask the following questions:

4.3 *What are the structures and processes to obtain and report data on health facilities and the services they provide?*

Probes:

- What are the data sources? Are these data routinely collected and reported as part of programme service delivery? Or collected through periodic health facility census or surveys and assessments of service availability and facility readiness?
- Is there a national Master Facility List or Registry?
  - Does the list include all facilities in the country (public/government, NGO, faith-based, private, etc.)?
  - Does the list capture cervical cancer services provided?
  - What data elements are captured (e.g. services, equipment, availability of water and electricity, etc.)?
- What entity is responsible for collecting and maintaining information on health facilities (including location and distribution) and the services they provide?
- How are these data used? Who has access to these data?
- If these data are derived from routine data collection, how are the data aggregated, analysed and transmitted?
  - If electronic systems are in use, what is the system name, what entity maintains it, and who are the users?
- Are these data linked or accessible to other systems (e.g. through APIs)? How are they linked? To what systems?

4.4 *What is the quality of these data?*

Probes:

- Please describe data quality in terms of the following six dimensions: Completeness, Conformity, Accuracy, Duplication, Integrity, and Timeliness.
- What data quality checks are in place for these data? Are routine data audits or updates conducted?
- Is there a back-up system for these data?

Where data are available but are NOT current, ask the following question (in addition to the questions above):

4.5 *What are the barriers to collecting or obtaining current data? What are potential opportunities for strengthening?*

Probes:

- Is this an issue of data access or availability?
- Are resources available for conducting more timely periodic surveys or assessments?
- Are there existing systems, or periodic surveys or assessments which could be better coordinated or leveraged to collect these data?

Where data are NOT available, investigate further by asking:

4.6 *Why are data not available?*

Probes:

- Is this an issue of data access or availability?
- If an issue of access, what are the barriers to obtaining these data for decision-making? Who currently has access to these data?
- If an issue of availability, are there existing systems, or periodic surveys or assessments which could be leveraged to collect these data for cervical cancer?
- What data and systems are other programmes and health-care areas using for planning and monitoring service delivery and distribution?

Data System Themes:
Systems and Processes (client level and aggregate service delivery and utilization data); Governance, Management and Coordination; Data Access and Use; Data Quality; Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 4.20–4.30

Note: Cross-reference Landscape Survey Questions 9.9–9.16 for information on client level and aggregate data systems. The responses for the questions 4.7–4.11 below will be referenced by questions 9.9–9.21 in order to consolidate information on existing data and data systems and to ensure there are no remaining gaps.

Where data are available, ask the following:

4.7 *What are the structures, processes and systems in place to collect data on service delivery at the client/facility level, and to aggregate and report these data?*

Probes:

- What is the level of standardization of existing structures and processes and what entities are responsible for coordination and management (e.g. National level? Subnational level? Programme or facility level?)?
- How are the numbers reported in the survey responses derived/obtained? What are the data sources?
- Who has access to these data?
- How are these data used (e.g. for patient management; for programme or policy development; to determine resource allocation; to inform research; to develop a report, etc.)? Are data used frequently and routinely?
- Are the data stored securely in order to maintain privacy and confidentiality?
- Are there standardized forms, registers or systems for the collection of client level data? And for summarizing and reporting facility level data to national or subnational level?
  - Is there a standardized set of minimum data elements to be collected?
  - Is this information sufficient for both patient management and programme monitoring?
- How do systems collecting client level data exchange information with data aggregation systems?

4.8 *What is the quality of client level data?*

Probes:

- Please describe data quality in terms of the following seven dimensions: Completeness, Conformity, Consistency, Accuracy, Duplication, Integrity, and Timeliness.
- What data quality checks are in place for these data? Are routine data audits or updates conducted?
- What is being done to improve data quality?
- Is there a back-up system for these data?

4.9 *What is the quality of aggregate data?*

Probes:

- Please describe data quality in terms of the following seven dimensions: Completeness, Conformity, Consistency, Accuracy, Duplication, Integrity, and Timeliness.
- What data quality checks are in place for these data? Are routine data audits or updates conducted?
- What is being done to improve data quality?
- Is there a back-up system for these data?

Where data are available but are NOT current, ask the following question (in addition to the questions above):

4.10 *What are the barriers to collecting or obtaining current data?*

Probes:

- Is this an issue of data access or availability?
- Are there specific data elements which create a barrier to timely reporting of summarized facility data?
- What are the major challenges with data collection, management and aggregation?
- Is there a demand for these data for decision-making? For patient and programme management?

Where data are NOT available, investigate further by asking:

4.11 *Why are data not available?*

Probes:

- Is this an issue of access or availability?
- If an issue of access, what are the barriers to obtaining these data for decision-making? Who currently has access to these data?
- Are there systems and processes in place to provide specific programmes with the necessary data for planning, management and targeting?
- What data and systems are other programmes and health-care areas using for planning, monitoring, and determining impact?
- Can the systems, structures and processes utilized by other programmes and health areas be leveraged for cervical cancer?

Data System Themes:
Context; Systems and Processes (tracking referrals); Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTION 4.10

Note: Cross-reference Landscape Survey Questions 9.21 for information on referral systems. The response for 4.12 below will be referenced by questions 9.13 in order

to consolidate information on existing data and data systems and to ensure there are no remaining gaps.

4.12 *What are the systems and processes for tracking women referred to services following a positive screen, or cervical cancer diagnosis?*

Probes:

- Do referral mechanisms work in a timely manner? If no, please identify the major gaps as you understand them.
- Is there integration or cross-referral between public and private facilities? For what services?
- Are there standardized paper forms or electronic systems and processes for referral mechanisms and tracking women through the continuum and between facilities? What are the primary gaps in these systems and processes?

DOMAIN 5: HUMAN RESOURCES

Data System Themes:
Context

REVIEW LANDSCAPE SURVEY QUESTIONS 5.1–5.17

5.1 *Please describe the availability of trained health-care service providers – focusing on those relevant to the provision of cervical cancer screening, precancerous lesion diagnostic and treatment, and invasive cervical cancer diagnostic and treatment services.*

Probes:

- What cadres of providers generally provide cervical cancer services?
- Are specific cadres outlined in policies, plans, strategies or clinical guidelines for cervical cancer? Are the providers who are currently providing services the same as those outlined?
- Are training needs or qualifications for cervical cancer service providers outlined in policies, plans, strategies or clinical guidelines for cervical cancer?
- Are these providers typically trained inside or outside of the country?
- Is the number of trained service providers sufficient to meet the needs of the population?
- What are the major gaps in the availability of trained service providers? How do these gaps impact service provision? Is anything being done to address these gaps?
- What entity is responsible for ensuring the training and distribution of a sufficient number of service providers?
- Are there opportunities that can be leveraged to increase the availability of trained cervical cancer service providers?

Data System Themes:
Systems and Processes (health-care provider training, education and capacity building management systems); Governance, Management and Coordination; Data Access and Use; Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 5.8–5.11

Where data are available, ask the following question:

5.2 *What are the structures and processes to obtain and manage data on health-care provider training, certification programmes, continuing education and capacity building?*

Probes:

- Is there a central system to track the training of cervical cancer service providers? Please describe the system: what are the data sources? What entity is responsible for maintaining the system? What entities report into the system?
- Is there a central system for tracking continuing medical education programmes? Please describe the system.
- Do systems include all available education and training opportunities (e.g. public/government, NGO, faith-based, private, etc.)?
- Are the systems for tracking provider training and certification integrated with or connected to the systems for managing human resource distribution (e.g. health provider registry or list)?
- How often is this information updated? What are the processes for updating and how is the information validated?

Where data are available but are NOT current, ask the following question (in addition to the question above):

5.3 *What are the barriers to collecting, obtaining or maintaining current data? What are potential opportunities for strengthening?*

Probes:

- Is this an issue of data access or availability?

- Are there existing systems, or periodic surveys or assessments which could be better coordinated or leveraged to collect and update these data?

- If an issue of access, what are the barriers to obtaining these data for decision-making? Who currently has access to these data?

Where data are NOT available, investigate further by asking:

5.4 *Why are data not available?*

Probes:

- Is this an issue of data access or availability?

- If an issue of access, what are the barriers to obtaining these data for decision-making? Who currently has access to these data?

- If an issue of availability, are there existing systems, or periodic surveys or assessments which could be leveraged to collect these data for cervical cancer?

- What data and systems are other programmes and health-care areas using for planning and monitoring service delivery and distribution?

Data System Themes:
Systems and Processes (health-care provider registry/census; human resources management information systems); Governance, Management and Coordination; Data Access and Use; Data Quality; Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 5.12–5.17

Where data are available, ask the following question:

5.5 *What are the structures and processes to obtain and report data on health-care service providers?*

Probes:

- What are the data sources (e.g. routine collection and reporting; periodic surveys and assessments of service availability and facility readiness; etc.)?

- Is there a national Master Provider List or Registry?

  - Does the list include all cadres of providers in the country (public/government, NGO, faith-based, private, etc.)? Or does it include only limited cadres (e.g. surgeons and doctors, but not nurses?)?

  - What data elements exist within this provider registry (e.g. qualifications, location, services they provide, training)?

  - Who has access to this provider list/registry?

- Is the national list or registry integrated with health-care provider training data or facility data?

- What entity is responsible for collecting and maintaining information on service providers (including location and distribution) and their qualifications?

- If these data are derived from routine data collection, how are the data aggregated, analysed and reported?

- If electronic systems are in use, what is the system name, what entity maintains it, and who are the users?

- What data quality checks are in place for these data?

- What is the quality of these data in terms of the following dimensions: Completeness; Conformity; Accuracy; Duplication; Integrity; and Timeliness?

Where data are available but are NOT current, ask the following question (in addition to the question above):

5.6 *What are the barriers to collecting or obtaining current data? What are potential opportunities for strengthening?*

Probes:

- Is this an issue of data access or availability?

- Are resources available for conducting more timely information updates through periodic surveys, assessments or other systematic means?

- Are there existing systems, or periodic surveys or assessments for general health care which could be better coordinated or leveraged to collect these data for cervical cancer?

Where data are NOT available, investigate further by asking:

5.7 *Why are data not available?*

Probes:

- Is this an issue of data access or availability?

- If an issue of access, what are the barriers to obtaining these data for decision-making? Who currently has access to these data?

- If an issue of availability, are there existing systems, or periodic surveys or assessments which could be leveraged to collect these data for cervical cancer?

- What data and systems are other programmes and health-care areas using for planning and monitoring

health-care provider availability, qualifications and distribution?

DOMAIN 6: EQUIPMENT, SUPPLIES AND MEDICINES

Data System Themes:
Context

REVIEW LANDSCAPE SURVEY QUESTIONS 6.1–6.9

6.1 *Please describe the availability of equipment and supplies for cervical cancer screening, precancerous lesion diagnostic and treatment, and invasive cervical cancer diagnostic and treatment services.*

Probes:

- What equipment, supplies, medicines or commodities present the largest barrier to providing cervical cancer services without interruption?
- Are supplies and medicines for cervical cancer on the national essential supplies and medicines lists? If no, what are the processes for including them? What are the barriers?
- Are the available equipment and supplies sufficient to meet the needs of the population?
- Are equipment, supplies and medicines more regularly available at certain levels of the health-care system? Or at private versus public facilities?
- Are medicines for invasive cervical cancer pain management and palliative care available to out-patients as oral prescriptions? Are these medicines only available to in-patients? What are barriers to out-patient availability?
- Are the line item costs available for cervical cancer supplies and commodities?

Data System Themes:
Systems and Processes (Procurement and Inventory Management Systems); Governance, Management and Coordination; Data Access and Use; Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 6.10–6.15

6.2 *Please describe the structures, systems and processes for procuring and managing equipment, supplies, medicines and commodities for cervical cancer prevention and control services.*

Probes:

- Who is responsible for procuring and distributing cervical cancer equipment? Are the same entities responsible for procuring supplies, commodities and medicines?
- What is the level of government ownership of the procurement system?
- Is there a structure or process for strategically determining the geographic distribution of equipment in order to increase service accessibility? Who manages this process?
- What system is used to procure & track inventory of cervical cancer screening and treatment supplies and commodities? Is this an electronic or paper-based system? Who enters inventory information and who has access?
- How is inventory managed in order to prevent stockouts at facilities, and how are stockouts monitored and addressed? What are the strengths and weaknesses of the inventory management system?
- Are the systems for managing inventory for supplies and commodities linked to those for procurement of medicines? Are these systems linked to systems capturing information on service utilization?
- How is the functionality and maintenance of equipment for cervical cancer screening and treatment monitored? What entity is responsible for maintenance?
- Are periodic surveys or assessments conducted in order to determine availability of equipment and supplies at facilities designated to provide cervical cancer services?
- Are there existing systems, structures or processes for procurement and inventory management which function well and could be leveraged for cervical cancer?

DOMAIN 7: LABORATORY

Data System Themes:
Context

REVIEW LANDSCAPE SURVEY QUESTIONS 7.1–7.7

7.1 *Please describe the availability, organization and management of laboratory services for cervical cancer screening, and precancerous lesion and invasive cervical cancer diagnostics.*

Probes:

- How is the laboratory system in the country organized? Are most cervical cancer services provided by government or private laboratories?
- Are most laboratories connected to hospitals or health facilities? Or are they standalone laboratories? Is this

organization service-dependent?

- Please provide a summary of the laboratory strategy and plan? If no strategy exists, are there future plans for such a strategy?
- Are there a sufficient number of laboratories to meet the demand for cervical cancer screening and diagnostic services?
- What are the primary gaps in the laboratory system?
- Please describe the processes, plans or guidelines for laboratory accreditation and/or quality and performance evaluations for cervical cancer screening and diagnostic test services (e.g. cytopathology, histopathology, HPV testing)?

Data System Themes:
Systems and Processes (Service Availability Data; Laboratory Accreditation Data); Governance, Management and Coordination; Data Access and Use; Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 7.5–7.7

Where data are available, ask the following questions:

7.2 *What are the structures and processes to obtain and report these data?*

Probes:

- What are the data sources? Are there data periodic census or surveys and assessments of laboratory service availability and readiness?
- Are there systems for tracking laboratory accreditation and/or quality and performance evaluations for cervical cancer screening and diagnostic test services (e.g. cytopathology, histopathology, HPV testing)? Please describe the systems.
- What data quality checks are in place for these data?
- What entity is responsible for collecting and maintaining information on laboratory human resources (including location and distribution), the services they provide and their level of accreditation/ qualification?
- What entity is responsible for collecting and maintaining information on laboratories (including location and distribution), the services they provide and their level of accreditation/qualification?
- How are data on laboratory human resources, service availability and accreditation used? Who has access to these data?

Where data are available but are NOT current, ask the following question (in addition to the questions above):

7.3 *What are the barriers to collecting or obtaining current data? What are potential opportunities for strengthening?*

Probes:

- Is this an issue of data access or availability?
- Are resources available for conducting timely periodic surveys, assessments or other systematic updates?
- Are there existing systems, or periodic surveys or assessments which could be better coordinated or leveraged to collect these data?

Where data are NOT available, investigate further by asking:

7.4 *Why are data not available?*

Probes:

- Is this an issue of data access or availability?
- If an issue of access, what are the barriers to obtaining these data for decision-making? Who currently has access to these data?
- If an issue of availability, are there existing systems, or periodic surveys or assessments which could be leveraged to collect these data for cervical cancer?
- What data and systems are other programmes and health-care areas using for planning and monitoring laboratory service delivery, distribution and quality?

Data System Themes:
Systems and Processes (Procurement and Inventory Management Systems); Governance, Management and Coordination; Data Access and Use; Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 7.8–7.9

7.5 *Please describe the procurement and distribution of laboratory supplies for cervical cancer screening and diagnostic services.*

Probes:

- Who is responsible for procuring and distributing laboratory supplies for cervical cancer diagnosis within the country? Are the same entities responsible for procuring supplies, commodities and medicines for health facilities?
- What system is used to procure & track inventory of laboratory supplies for cervical cancer? Is this an electronic or paper-based system? Who enters inventory information and who has access?

- What is the level of government ownership of this system? How broadly is it used?
- Are the systems for managing inventory for laboratory supplies and commodities linked to those for procurement of supplies, commodities and medicines for health facilities? Are these systems linked to systems capturing information on service utilization?
- How is inventory managed in order to prevent stockouts at laboratories, and how are stockouts monitored and addressed? What are the strengths and weaknesses of the inventory management system?
- Are periodic surveys or assessments conducted in order to determine availability of laboratory supplies for cervical cancer and functionality of procurement system and supply chain?

Data System Themes:
Systems and Processes (Results Reporting); Governance, Management and Coordination; Data Access and Use; Health Information Exchange; Data Quality

REVIEW LANDSCAPE SURVEY QUESTIONS 7.10–7.14

7.6 *Please describe the systems and processes for documenting and communicating laboratory test results.*

Probes:

- Is there a national Laboratory Information System which includes client level laboratory results data? What entity is responsible for maintaining and updating this system?
- What are the standards for documenting and reporting cytology results? HPV test results? Biopsy results? Is the standard terminology used consistently?
- Are there guidelines for collecting and reporting laboratory results data?
- What is the quality of these data in terms of the following dimensions: Completeness, Conformity, Accuracy, Duplication, Integrity, and Timeliness? Are data quality checks in place?
- What information is exchanged between the laboratory and health facility? What information accompanies the sample? What information is provided back to the facility and the provider?
- Please describe the flow of results information from the laboratory to the client? Is this direct, or via the health facility/provider?
- Is feedback provided to the facility/provider on inadequate or unusable samples?
- Are there forms or systems to facilitate timely information exchange between health facilities/providers and laboratories?
- Are there specific laboratory-based tests or processes which delay results reporting?

DOMAIN 8: FINANCING, BUDGET AND COSTING

Data System Themes:
Context

REVIEW LANDSCAPE SURVEY QUESTIONS 8.1–8.9

8.1 *What are the opportunities and threats resulting from the current financing and budgeting structure for cervical cancer services, programming, and human resources?*

Probes:

- Is the current funding stream sustainable? Are there specific risks associated?
- If there is not a dedicated cervical cancer budget, is there a regular percentage allocation for cervical cancer services and programming?
- Who is involved in developing the budget for cervical cancer (i.e. Are programme personnel involved? Service providers or clinicians? A national costing and planning unit not specific to cervical cancer?)?
- Are there resources specifically allocated to supporting capacity building and provider training? Are these resources sufficient?

Data System Themes:
Systems and Processes (costing and budgeting); Governance, Management and Coordination; Data Access and Use; Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 8.1–8.6

8.2 *What are the systems and processes for cervical cancer budgeting and costing?*

Probes:

- Are cervical cancer costing data systematically collected and managed? Is collection of cost data an on-going process or was it done as a one-time activity?
- How are line item costs for cervical cancer estimated or determined? How are service costs per individual estimated? How often are line item costs updated?
- Who has access to these data and systems?
- Are the systems and processes for budgeting and costing linked to other systems (e.g. those for procurement and supply management)?

8.3 *Where costing data (i.e. line item costs, service*

costs per individual, overall budget requests and allocations) are available, how have these data been used in the past 12 months?

Probes:

- For programme budget forecasting?
- Inventory and stock maintenance?
- Cost-effectiveness or efficiency analyses?
- Programme or impact evaluation?
- Planning for service introduction or scale-up?
- Service feasibility studies?

DOMAIN 9: HEALTH INFORMATION SYSTEMS OVERVIEW

Data System Themes:
Context; ICT Infrastructure, Data Policies, Plans, Strategies and Guidelines

REVIEW LANDSCAPE SURVEY QUESTIONS 9.1 and 9.2

Where a national policy, plan or strategy for ICT exists, ask the following:

9.1 *Please describe the national ICT policy, plan or strategy.*

Probes:

- What pillars or focus areas are prioritized? Does the plan directly address health? And/or cervical cancer prevention and control?
- Does it outline a clear framework or strategy for implementation? For monitoring implementation?
- What are some of the activities outlined in the policy, plan or strategy?
- What are the expected outcomes? Is there a timeline associated with implementation and outcomes?

Where a national policy, plan or strategy for eHealth exists, ask the following:

9.2 *Please describe the national eHealth policy, plan or strategy.*

Probes:

- What does the plan hope to achieve? Is there a clear goal or vision?
- Is there an implementation framework or roadmap that reflects country priorities? What are the key priorities?
- Does it include a plan to monitor implementation? Assess opportunities and gaps?
- Are required components and resources identified?
- Is cervical cancer prevention and control addressed?

Where there are no national policies, plans, or strategies for ICT or eHealth, ask the following:

9.3 *What are the barriers to the development of a national policy, plan, or strategy for ICT or eHealth?*

Probes:

- Are resources available for development?
- Has the need for such a policy, plan or strategy been identified?
- Are there plans to draft such a policy, plan or strategy?
- What currently guides ICT and eHealth development and implementation?

Data System Themes:
Governance, Management and Coordination; Human Resources; Budget and Financing

REVIEW LANDSCAPE SURVEY QUESTIONS 9.4–9.6

9.4 *Please describe the organizational structure of eHealth and ICT, and any key strengths or weaknesses.*

Probes:

- Is there an eHealth coordinator? What Ministry or department is responsible for eHealth coordination?
- Is there one unit or multiple units that oversee health information systems?
- Are there established eHealth coordination structures specifically for cervical cancer on a national or subnational level?
- Do these structures engage all key stakeholders at the district/municipality level?
- Is there a sufficient number of staff to support national ICT and eHealth needs? Are staff adequately and appropriately distributed?
- Are there resources allocated to ICT and eHealth? How are they financed and who is responsible for budget

development?

- What are some of the key opportunities or threats that the structure poses for high-quality cervical cancer data systems?

Data System Themes:
Data Policies, Plans, Strategies and Guidelines

REVIEW LANDSCAPE SURVEY QUESTION 9.3

Where a national M&E plan for cervical cancer exists, ask the following:

9.5 *Please describe the M&E plan for cervical cancer prevention and control.*

Probes:

- Is the M&E plan for screening and PCL treatment integrated with the M&E plan for invasive cervical cancer? If no, please describe each (use probes below for each plan).
- How widely is the plan disseminated?
- Are action plans included in the M&E strategy/plan?
- Does the plan outline processes, timelines and responsibilities? Please describe.
- Does the plan outline specific indicators and a plan for data collection, analysis and reporting?
- Is capacity building for M&E staff addressed? Is development of data systems and tools addressed?

Where a national M&E plan for cervical cancer does not exist, ask the following:

9.6 *What are the barriers to developing a national M&E plan for cervical cancer prevention and control?*

Probes:

- Are resources available for development? Does the technical capacity for the plan's development exist?
- Has the need for an M&E plan been identified?
- Are there plans to develop an M&E plan for cervical cancer?
- What currently guides cervical cancer monitoring and evaluation?

Data System Themes:
Governance, Management and Coordination; Budget and Financing

REVIEW LANDSCAPE SURVEY QUESTIONS 9.7–9.9

9.7 *Please describe the team responsible for M&E of cervical cancer prevention and control programming, noting any strengths, challenges and gaps.*

Probes:

- How is this team structured? Are there protocols and lines of authority for these individuals?
- Is M&E for cervical cancer screening and precancerous lesion treatment integrated with M&E for invasive cervical cancer?
- What are the responsibilities and outputs for the M&E team?
- Are M&E efforts harmonized between public, private entities? Between national government and their implementing partners?
- Is there an active M&E working group, and are there minutes to demonstrate their work?
- Is there a dedicated budget allocation for M&E? What entity (or entities) finances M&E at the national level?
- Are M&E staff adequately and appropriately distributed in the country? Is there any bias toward distribution at central level?
- Does the number of staff meet needs? What are some of the key gaps in staffing?
- Is there harmonization between units/departments? And across the health system levels?

Data System Themes:
Human Resources

REVIEW LANDSCAPE SURVEY QUESTION 9.10

9.8 *Please describe the availability of trained personnel to support data and data systems.*

Probes:

- Are staff adequately and appropriately distributed in the country? Is there any bias toward distribution at central level?
- Does the number of staff meet needs? What are some of the key gaps in staffing?
- Is there harmonization between units/departments?

And across the health system levels?

- Are there IT staff or developers specifically dedicated to cervical cancer data and systems?
- Are staff to support data systems primarily MoH employees? Or contractors? Or external consultants?

Data System Themes:
Systems and Processes; Data Access and Use; Health Information Exchange; Data Quality

REVIEW LANDSCAPE SURVEY QUESTIONS 9.11–9.12 AND DISCUSSION GUIDE QUESTIONS 4.7–4.11

This question focuses primarily on information relevant to client level data systems and processes; responses to 4.7–4.11 provide additional detail on data access and use, health information exchange, and data quality.

9.9 *Please describe the client level data systems in use, noting any key strengths and gaps.*

Probes:

- Is the system exclusive for cervical cancer or part of a comprehensive client-level system?
- Do these systems collect data from static facilities only? From static facilities and mobile units? From campaigns or outreach?
- Are campaign data shared with other care settings? Which ones and how are they shared?
- Are there exemplar programmes that manage client level data well? If yes, which programmes?
- Are the data collected at the client level mostly free text or coded?
- If electronic systems exist, what is the level of MoH endorsement of system, and stage of maturity (early design, pilot, scaling, no longer operational)?
- What are the future plans for national/subnational client-level systems? What are the anticipated opportunities and challenges?
- If any systems have changed, what strategies are in place to integrate historical data?

Data System Themes:
Systems and Processes; Data Access and Use; Health Information Exchange; Data Quality

REVIEW LANDSCAPE SURVEY QUESTIONS 9.15–9.18 AND DISCUSSION GUIDE QUESTIONS 4.7–4.11

These questions focus primarily on data systems and process for aggregating and reporting service delivery and programme monitoring data; responses to 4.7–4.11 provide additional detail on data access and use, health information exchange, and data quality.

9.10 *Please describe the data systems and processes for aggregating and reporting data, highlighting strengths and weaknesses of these systems and any systems for M&E.*

Probes:

- Is the system exclusive for cervical cancer? Or a national health information system which collects cervical cancer data in addition to other health data?
- What data are reported into these systems and by whom (e.g. static facilities, mobile units, campaigns, hospitals, etc.)?
- Is feedback on the quality of reported data provided from the higher programme levels (e.g. national and subnational level) to the facility level?
- Do these systems allow for calculation of cervical cancer indicators? Which indicators?
- Are aggregate data systems electronic or paper-based? Is aggregation manual?
  - If electronic systems exist, what is the level of MoH endorsement of system, and stage of maturity (early design, pilot, scaling, no longer operational)?
- Are these data transmitted to the MoH and if so, through what process?
- Are there exemplar programmes that manage aggregate data well? If yes, which programmes?
- Are the data reported and entered into aggregate systems mostly free text or coded?
- What are the future plans for national/subnational aggregate systems? What are the anticipated opportunities and challenges?
- If any systems have changed, what strategies are in place to integrate historical data?

9.11 *What indicators are currently used to monitor cervical cancer prevention and control (screening and PCL treatment; invasive cervical cancer treatment and management)? Please provide the list.*

Probes:

- How have these indicators evolved/changed over time?

- What are the current and future national plans around M&E indicators for screening and PCL treatment?
- Who is responsible for developing and updating indicators?
- What are the barriers and opportunities to updating existing, or developing new, indicators?
- What other non-MoH institutions/organizations have established indicators for screening and PCL treatment?
- Are any of the indicators linked to HIV status?
- Do indicators align with global standards?

9.12 *How widespread is the adoption of the nationally standardized indicators?*

Probes:

- What proportion of cervical cancer programmes in the country routinely utilize these indicators for programme M&E?
- Are these indicators reported from facilities/regions to the MOH, at a regular frequency (e.g. at least annually)?
- Are there facilities or regions that are more compliant with reporting than others? If yes, which ones, and why?
- Do private facilities, or other facilities outside of the government health system monitor and report on these indicators?

Data System Themes:
Systems and Processes; Data Access and Use; Health Information Exchange; Data Quality

REVIEW LANDSCAPE SURVEY QUESTIONS 4.10, 9.21–9.22 AND DISCUSSION GUIDE QUESTION 4.12

9.13 *What kinds of systems are used for cervical cancer clinical consultation and referral?*

Probes:

- Are there protocols in place for client referrals?
- Are there data systems to support these across the continuum of cervical cancer prevention, screening and treatment?
- What is the predominate system used within the country for referral to screening services? To treatment services?
- What level of organization exists around these referral mechanisms?
- Describe whether telemedicine systems are synchronized/real-time or a synchronized?
- Are there any mobile-device based systems in use for prevention, screening and treatment?
- Are there exemplar referral, mobile-based or telemedicine systems?

9.14 *Please describe any decision support systems relevant to cervical cancer.*

Probes:

- What cervical cancer components are addressed by these systems?
- How does each decision support system work?
- What are some exemplar decision support systems in use around cervical cancer or other care-related CDSS?
- If any decision support systems exist that do not have cervical cancer components, what are the opportunities to integrate cervical cancer decision support within those systems?

Data System Themes:
Data Quality

REVIEW LANDSCAPE SURVEY QUESTIONS 9.15–9.18 AND DISCUSSION GUIDE QUESTIONS 4.4; 4.8; 4.9; 9.5; 9.10–9.12

9.15 *What efforts are in place to improve quality of M&E data?*

Probes:

- How routine and formal are these efforts?
- Are there individuals tasked with understanding and improving data quality gaps within the country?
- Is there routine supervision and data audit?
- Are data quality improvement efforts conducted in a systematic or ad hoc fashion?
- Is there a formal written policy for quality improvement (please get the documentation, if available)

9.16 *Please describe the structures and processes in place for backing up cervical cancer data.*

Probes:

- How routinely are the backups performed?
- What guidelines and processes are in place for backups and archiving?
- Is the back-up method standardized, or variable across institutions and regions? Is it within or outside of the country?

- Are there backup security mechanisms in place?
- Who has access and control of the data that have been backed up and archived?

9.17 *What are the different legacy systems that exist relevant to cervical cancer screening and treatment?*

Probes:

- Are legacy data reported on a national level?
- Are there efforts to integrate legacy systems to current systems?
- How are legacy data represented in national reporting systems?
- Are legacy data standardized to meet current standards and guidelines?

Data System Themes:
Health Information Exchange

REVIEW LANDSCAPE SURVEY QUESTIONS 9.11–9.18 AND ALL DISCUSSION GUIDE QUESTIONS UNDER THE HEALTH INFORMATION EXCHANGE THEME (1.1; 1.5; 2.6; 2.7; 4.3; 4.7; 4.12; 5.2; 5.5; 6.2; 7.2; 7.5; 7.6; 8.2)

9.18 *What is the status of health information exchange in the country?*

Probes:

- What methods are in use for health information exchange?
- What is the level of interoperability of existing systems? Is there a health enterprise architecture?
- What is the level of horizontal integration of patient information across points of care (e.g. lab, pharmacy, etc.)?
- What is the stage of maturity (e.g. early design, pilot, scaling, no longer operational)?
- Which data standards are used? What hardware is required for use?
- What is the level of customization or continuous development required?
- What mechanisms are in place to measure the quality of data?

9.19 *What methods are used (or planned for use) to uniquely identify clients?*

Probes:

- Are IDs standardized across systems (e.g. across clinics, registries)?
- What systems are in place to generate and store identifiers?
- Are there guidelines on how identifiers are generated and issued?
- Are there systems for managing legacy identifiers?
- What national or subnational level initiatives are there for standardizing identifiers? Are there models for client ID systems?
- Are biometrics used?

9.20 *Is there shared terminology, vocabulary or coding utilized in cervical cancer programme data systems and exchange?*

Probes:

- Who is responsible for establishing terminology?
- How often is the terminology updated?
- Is the terminology aligned with international standards and if so, which standards are these?
- Is the terminology endorsed by the MoH?
- If there is shared terminology/definitions, is there an electronic version of the dictionary?

9.21 *Please describe how facility level systems integrate or share information with national Ministry level systems (e.g. M&E and reporting systems).*

Probes:

- What is the level of accessibility of these systems? Are they user-friendly?
- What is the timelines of data uploaded?
- How do the systems integrate with the M&E system or with registries?
- Are cervical cancer indicators incorporated into the national HMIS?
- What are the available systems for vertical data aggregation for cervical cancer (e.g. DHIS2)? What is the level of MoH endorsement and ownership level?
- What are examples of systems with good vertical integration?

SUGGESTED LIST OF DOCUMENTS FOR DESK REVIEW

This list of suggested documents is intended to be comprehensive but not exhaustive. There may be relevant documents available which are not on this list but should still be reviewed. Documents from the list will be collected from in-country sources as well as via internet searches by the RAP team. Paper copies of documents should be scanned whenever possible, and all electronic copies should be maintained in accordance with the assessment data management protocol. If a document is in draft form, is not currently available, or does not exist, this should be noted in the response to the relevant survey questions.

Domain 1

Demographics and Epidemiology

- Census data report
- Population-based survey reports or fact sheets
- Cancer registry reports
- Programme data summary reports
- HIV prevalence and incidence modelling

Domain 2

Governance, Management and Infrastructure

- Organogram for the national Ministry
- Organogram for the cervical cancer programme
- List of key NGOs and partners working in cervical cancer. *Includes organizations working in research, training, service provision, surveillance, health promotion, etc.*

Domain 3

Policies, Plans, Strategies and Clinical Guidelines

- Strategic health plan for the country
- Cancer screening policy or strategic plan
- National cancer prevention and control policy
- HPV vaccination policy or strategic plan
- National cervical cancer treatment policy or strategic plan
- Policy relevant to any aspect of cervical cancer
- National clinical practice guidelines for cervical cancer screening
- Clinical practice guidelines for cervical cancer screening specific to HIV infected women
- National clinical practice guidelines for the management of invasive cervical cancer
- Policies and clinical practice guidelines used for cervical cancer screening and treatment of invasive cervical cancer

Domain 4

Service Availability and Utilization

- Documents and strategic plans outlining the cervical cancer prevention, screening and treatment programmes
- Cancer registry, national monitoring and other reports with cervical cancer screening, treatment and invasive cancer indicator data
- Service availability surveys, health facility census reports, and facility registry
- Standardized forms and registers for individual/client level cervical cancer data; standardized summary and reporting forms; data dictionary for electronic client level systems (e.g. EMR)

Domain 5

Human Resources for Health

- Reports from human resource management information systems, or health worker registry (e.g. master provider index)
- Budget reports for salary outlay
- Report on medical schools, training, specialty training
- Strategy for health worker capacity building or continuing education

Domain 6

Equipment, Supplies and Medicines

- Essential supply list and essential medications list
- Lists of cervical cancer supplies and equipment available (e.g. inventory reports, orders, etc.)
- Guidelines, standard operating procedures (SOPs) or technical specifications for system used to procure and distribute equipment and supplies for cervical cancer
- Reports or findings from health facility surveys (e.g. service availability and facility readiness surveys)

Domain 7

Laboratories and Diagnostics

- National policy, plan or strategy for laboratory development and management
- List of laboratories offering cervical cancer services *(Including Pap smear processing and review, cervical tissue histopathology processing and review, HPV test processing, etc.)*
- Guidelines for national quality assessment programme for cytology and histopathology
- Quality assurance (QA), control (QC) and improvement

(QI) strategies, guidelines or SOPs for laboratories
- Sample cytology and histology request and results return forms

Domain 8
Budgeting, Financing and Costing

- Salary structure for government health personnel
- Donor country operations plans or memorandums of understanding showing budgetary commitments
- Previous programme budgeting or costing activity documents (e.g. spreadsheets or summary reports)
- Cost analysis and planning documents or reports (e.g. cost effectiveness analysis, analysis of average cost of services per individual)

Domain 9
Data and Data Systems

- Data management policies, plans or guidelines
- National eHealth and ICT strategy, policy or plan
- mHealth policy, strategy or plan
- National M&E plan for cervical cancer
- List of standardized national indicators for cervical cancer
- Organogram for cervical cancer M&E
- Document showing budget allocations for cervical cancer data systems and M&E efforts
- Reports of specific evaluations that have been conducted on cervical cancer information systems
- Reports of evaluations, assessments, and audits conducted on health information systems and cervical cancer information systems
- Data access policies and guidelines
- Predefined formats or standards for M&E and indicator data; national health information system technical notes and data dictionary
- Standardized forms and registers for individual/client level cervical cancer data; standardized summary and reporting forms; data dictionary for electronic client level systems (e.g. EMR)
- Guidelines for reporting data into HPV vaccine and cancer registries, and for monitoring and quality control of registry data
- Terminology or vocabulary in cervical cancer systems (e.g. comprehensive shared terminology/definitions; national concept dictionary)

EXEMPLAR PROGRAMME INTERVIEW DISCUSSION GUIDE

This targeted interview discussion guide is intended to elicit a description of a ministry or partner cervical cancer programme with existing monitoring and evaluation, surveillance, or information systems. The objective of these interviews is to describe the programme, its implementation, and the relevant systems in detail, in order to identify best practices, lessons learned, and existing systems that can be leveraged for strengthening cervical cancer data and data systems nationally.

Programme Overview	
Question	• Please provide a brief history and overview of the programme, including the year of origin.
Probes	• Is this an offshoot of a pre-existing programme (e.g. HIV care and treatment)? If yes, is there still a high level of integration?
	• Is the programme integrated into a larger hospital/clinic?
	• Is this a publicly or privately funded programme/facility?
	• Is the facility/programme funded by several different mechanisms (e.g. supplies paid for by MoH and worker salaries paid for by PEPFAR, etc.?) And does this effect procurement/ordering/stock and inventory maintenance?
Question	• What is the programme/facility catchment area?
Probes	• Please describe the demographics of the patient population (including HIV prevalence).
	• What is the target population for cervical cancer screening and treatment?
Description of Service Provision	
Question	• Please describe service availability in this programme/facility.
Probes	• What cervical cancer screening method is used in this programme/facility?
	• Is cervical cancer screening provided as part of women's/reproductive health services? HIV services? Antenatal care/maternity services? Part of campaign?
	• What is the frequency of screening service provision (i.e. always available vs. only available on set "clinic days")
	• Is treatment available on site? Is there treatment of precancerous lesions only? Is cancer treatment available at the facility? If so what modalities are used for treatment?
	• What is the frequency of treatment service provision (i.e. always available vs. only available on set "clinic days")
	• What other gynecological or medical services are provided, if any?

Question	• Please describe programme/facility staffing.
Probes	• Where are screening/treatment providers trained? (e.g. local providers trained at medical schools in-country, local providers trained abroad, foreign providers trained abroad, etc.)
	• Are there practical skills refresher trainings available in-country?
	• Are there systems to track training/certification of providers?
Programme Capacity	
Question	• How does this facility/programme ensure readiness to provide services?
Probes	• What is the total number of women provided with screening annually by the programme/facility? Total number provided with treatment?
	• What equipment is available on-site to provide services? Is the equipment well maintained/functional? If no, is there a reliable routine process/system for addressing issues, or is this done ad hoc?
	• Is there access to on-site pathology services or real-time consultation? If not, where are pathology services located and what is the typical turnaround time?
	• Are there currently any capacity limitations (e.g. personnel, equipment, physical space, supplies/reagents, internet/network system connectivity, and electricity)?
	• Is there a process (or system) for giving feedback on capacity limitations to decision-makers?
	• Is there a reliable routine process/system for addressing issues with supply/reagent procurement and stock management?
Question	• Is there a functional referral process in this programme/facility?
Probes	• Does the programme/facility have the ability to except referrals? Are referrals sent outside of facility? If yes, where are patients referred to?
	• Are there methods/systems to track referrals?
	• Is there bi-directional communication between referring and referral facilities?
	• Is information collected that would enable the facility/programme to monitor referral time variables (e.g. time between screening and facility and patient receipt of result; time between screening result and treatment; etc.)?
Data Collection, Reporting, and Management Practices	
Question	• Please describe the client level data collection process.
Probes	• Do you use electronic medical records, electronic databases, or paper-based data collection tools?
	• How many different tools hold patient data at a facility? Is there integration between tools/systems within the facility?
	• Is there integration between electronic systems at this facility and systems at other facilities (or at the subnational or national level)?
	• Do patients have a unique patient ID number? If so, how is it generated, and is this standardized nationally? Is the ID number used throughout the facility or for any other purposes?
	• Can this number be used to reliably link patients from cervical cancer screening, all the way through to post-treatment outcomes?
Question	• What staff are responsible for data collection and management?
Probes	• Who is responsible for collecting patient level cervical cancer data and what data collection tool do they use (request a copy of form from the programme/facility)? Was this person trained on the data collection tools? If yes, how/when/by whom?
	• Is this person responsible for collecting patient level data on other diseases/conditions? How many different tools/forms does this person have to complete per patient?
	• Is there a different person responsible for entering the patient level cervical cancer data into an electronic system/paper register/ patient chart? Was the person responsible trained on the data collection tools/systems? If yes, how/when/by whom?
	• Is this person responsible for entering patient level data on other diseases/conditions? How many different tools per patient does this person have to take data from/enter data into?

Question	• Please describe the structures and processes for reporting and patient and programme monitoring.
Probes	• Is the information collected in the patient/facility-level records sufficient for patient management and monitoring? For programme management and monitoring?
	• What are the sources of data for reporting?
	• Who is responsible for reporting (i.e. aggregating from data sources and preparing reporting template)?
	• Is the person responsible for cervical cancer data reporting, also responsible for reporting on additional diseases? If yes, briefly describe the reporting burden on this individual (e.g. how many diseases; how many different forms/tools/recipient entities; etc.)
	• To whom are data reported (e.g. funding agency, regional versus national MOH, or a health registry)? What is the frequency of reporting to each entity?
	• Is the information reported standardized across entities (i.e. one standardized group of indicators with one standardized reporting form), or does the information differ depending on the recipient entity (e.g. one set of indicators for MoH, with a more detailed, larger set of indicators for an external donor/funding mechanism)?
	• Is any feedback received by the facility/programme concerning reported data/indicators?
	• Were providers engaged in the development of indicators reported to MoH, or other entities?
	• What are the challenges with reporting?
	• How is the data used (i.e. ordering of supplies, allocation of human resources, budget/resource allocation, grant proposals, requirement by programme stake holders, inform public health policy, programme monitoring)
Question	• How does the facility/programme ensure data quality?
Probes	• What is their quality (e.g. completeness, timeliness, validity, etc.)?
	• Are there any data quality assurance mechanisms in place? Have any data quality audits been conducted?
Programme Costing and Budgeting	
Question	• What are the facility/programme structures and processes for budgeting and costing?
Probes	• Is line item cost data available for screening and treatment supplies/reagents/consumables?
	• Who is responsible for projecting programme equipment/supply needs and the relevant budget allocation?
	• What is the process for determining facility programme budget (i.e. is there a specific tool/system utilized)? Are costs estimated, or reflect actual line item costs in-country?

SECTION 2

POPULATION-BASED SURVEY MODULES

INTRODUCTION

Population-based surveys can be used to assess cancer screening coverage, and to identify barriers to accessing screening and treatment services. This section of the toolkit builds on the Global Monitoring Framework cervical cancer screening indicator, and provides survey administrators, cervical cancer programme implementers, ministries of health, and other stakeholders with a set of standardized questions related to cervical cancer. The use of a set of standardized questions will help ensure the data collected are useful for programme planning and evaluation, and are comparable over time and across countries.

The questions will provide information on the quality of cervical cancer screening policies and programmes. When used in countries with existing cervical cancer programmes, the data provided will generate robust and meaningful estimates of screening and treatment prevalence. Countries without national programmes can select appropriate questions from the modules to generate information for advocacy and programme planning.

Through adaptation and incorporation of these standardized questions, programmes can leverage existing population-based surveys to measure key indicators of cervical cancer screening and treatment, including:

1. Screening prevalence;
2. Follow-up and treatment of screened women; and,
3. Barriers and facilitators to screening and treatment.

The 13 standardized questions, with accompanying introductory statements, are set out in two modules: i) a “Core” (C) module comprising five questions; and ii) a “Core Plus” (CPLUS) module comprising the five Core questions, plus a further eight questions. The Implementation Tools and Materials at the end of this section provide the modules in survey format, as well as reference sheets for each of the introductory statements and Core and Core Plus questions. These reference sheets provide survey administrators with the necessary background information and instructions for adapting and incorporating the questions into an existing population-based survey. All potential changes to questions and introductory statements should be discussed with and approved by supervisors, including those based on key information gathered during cognitive testing. Where applicable, reference sheets also include special considerations for analysis, and for intersections with Section 3, Patient and Programme Monitoring, and Section 4, Facility-based Surveys, of this toolkit.

Cognitive testing of the modules found that some women had difficulty understanding definitions of the cervix and cervical cancer testing methods, and that their understanding improved with the use of images. Examples of open-source images that can be adapted based on context and used with the introductory statement to increase understanding can be found in the Implementation Tools and Materials sub-section at the end of this section.

CORE MODULE

The Core module comprises an introductory statement and five questions designed to measure cervical cancer screening coverage, screening interval, and follow-up and treatment. The five questions and the indicators they measure are listed in Table 2.1 below.

Notable is that treatment related indicators cover both treatment of precancerous lesions and treatment of invasive cervical cancer. Palliative care is not addressed in this module.

TABLE 2.1
Core module: measuring key aspects of screening and treatment

SUBJECT AREA	QUESTION	INDICATOR
Screening		
Screening Prevalence	C1: Has a health-care worker ever tested you for cervical cancer?	C1: Percentage of women who have ever been screened for cervical cancer
Last Screening	C2: When was your last test for cervical cancer?	C2: Percentage of screened women who were last screened within a specific time frame
Result		
Last Screening Result	C3: What was the result of your last test for cervical cancer?	C3: Percentage of screened women who received the result of their last screening test Percentage of screened women who received each type of result (e.g. Abnormal, Normal, etc.) on their last screening
Follow-up and Treatment		
Follow-up after Abnormal/Positive/Unclear Result on Last Screening	C4: Did you have any follow-up visits because of your last test result?	C4: Percentage of women with an abnormal, positive, or unclear result on their last screening test who received follow-up
Treatment after Abnormal/Positive/Unclear Result on Last Screening	C5: Did you receive any treatment to your cervix because of your last test result?	C5: Percentage of women with an abnormal, positive, or unclear result on their last screening test who received treatment

CORE PLUS MODULE

The expanded – or "Core Plus" – module includes the five Core module questions plus an additional eight questions. The additional eight questions focus on: knowledge and awareness; barriers and facilitators to screening; screening location; single-visit approach; barriers to treatment; and willingness to accept sample self-collection (e.g. for HPV testing). Palliative care is not addressed in this module.

Whereas questions from the Core module generate key basic information, the additional questions of the Core Plus module can be selected by survey administrators where appropriate to country context, priorities and needs.

The Core Plus module questions and the indicators they measure are listed in Table 2.2. In order to distinguish between the Core questions embedded within the Core Plus module, Core questions are coded "C#", and Core Plus questions are coded "CPLUS#". When incorporating Core or Core Plus questions into existing surveys, survey administrators may alter this naming convention to align with the existing survey.

TABLE 2.2

Core Plus module: measuring further aspects of screening and treatment

SUBJECT AREA	QUESTION	INDICATOR
Knowledge and Awareness		
Knowledge and Awareness	CPLUS1: Have you heard of cervical cancer?	CPLUS1: Percentage of women who are aware of cervical cancer
Screening		
Screening Prevalence	C1: Has a health-care worker ever tested you for cervical cancer?	C1: Percentage of women who have ever been screened for cervical cancer
Age at First Screening	CPLUS2: At what age were you first tested for cervical cancer?	CPLUS2: Average age at first screening
Last Screening	C2: When was your last test for cervical cancer?	C2: Percentage of women who were last screened within a specific time frame
Facilitators to Last Screening	CPLUS3: What is the MAIN reason you had your last test for cervical cancer?	CPLUS3: Percentage of women who report a specific facilitator as a motivator for receiving last screening
Last Screening Location	CPLUS4: Where did you receive your last test for cervical cancer?	CPLUS4: Percentage of women who were screened at a specific location
Result		
Last Screening Result	C3: What was the result of your last test for cervical cancer?	C3: Percentage of screened women who received the result of their last screening test Percentage of screened women who received each type of result (e.g. Abnormal, Normal, etc.) on their last screening
Follow-up		
Follow-up after Abnormal/Positive/Unclear Result on Last Screening	C4: Did you have any follow-up visits because of your last test result?	C4: Percentage of women with an abnormal, positive, or unclear result on their last screening test who received follow-up
Treatment		
Receipt of Treatment after Abnormal/ Positive/Unclear Result on Last Screening	C5: Did you receive any treatment to your cervix because of your last test result?	C5: Percentage of women with an abnormal, positive, or unclear result on their last screening test who received treatment

SUBJECT AREA	QUESTION	INDICATOR
Prevalence of Single-visit Approach Services Received	CPLUS5: Did you receive the treatment during the same visit as your last test for cervical cancer?	CPLUS5: Percentage of women who received screening and treatment through a single-visit approach (SVA)
Barriers		
Barriers to Treatment	CPLUS6: What is the MAIN reason you did not receive treatment as a result of your last test result?	CPLUS6: Percentage of untreated women with an abnormal, positive, or unclear result on last screening who reported a specific barrier to treatment
Barriers to Screening	CPLUS7: What is the MAIN reason you have never had a cervical cancer test?	CPLUS7: Percentage of unscreened women who reported a specific barrier to screening
Self-collection		
Acceptability of Self-collection	CPLUS8: Would you be willing to collect a sample by yourself to test for cervical cancer either at a health-care clinic, or in your home, if you were given instructions on how to collect the sample?	CPLUS8: Percentage of women willing to administer sample self-collection

METHODOLOGICAL CONSIDERATIONS FOR THE SURVEY MODULES

The Population-based Survey modules provide countries with the data required to measure the prevalence of screening and treatment.

Once prevalence data are appropriately weighted, based on survey design and country context, screening and treatment coverage can be assessed.

SAMPLING METHOD

The questions included in the survey modules are designed for incorporating into existing population-based surveys. Population-based surveys are diverse and the country contexts in which they work are varied; each survey will have its own methodology and design, and employ its own sampling methods. Examples of the differences in survey sampling methods are shown in Table 2.3.

TABLE 2.3
Sampling method by select population-based survey

SURVEY	TYPICAL SAMPLE SIZE	RESPONDENT AGE RANGE	SAMPLING METHOD
DHS	Varies based on country context	15–49	Probability Proportion to Size (PPS) sampling to select clusters. Systematic selection of households (HHs) from a list of all HHs in the cluster. Random selection of eligible HH member. (Often, all women aged 15–49 in the HH are interviewed.)
PHIA	Varies by country context and dependent on HIV incidence and prevalence	Varies by country context: 15–49 All adults >15 Module for adolescents: 10–14	Two stage cluster-based sampling at the HH level.
MICS	Varies based on country context	15–49	Cluster sampling at HH level. (Respondents include mothers or caretakers of the children in each HH.)
RHS	Varies based on country context	15–49	Cluster sampling at the HH level.
STEPS	Varies based on country context	18–69	Cluster sampling at HH level. Random selection of eligible HH member.

DHS: Demographic Health Survey; PHIA: Population-based HIV Impact Assessments survey; MICS: Multiple Indicator Cluster Survey; RHS: Reproductive Health Survey; STEPs: WHO Stepwise approach to surveillance survey.

Survey administrators should work closely with their survey's biostatisticians, methodologists and epidemiologists when determining sample size and respondent age. Cervical cancer data should be weighted appropriately based on the survey's design.

The following section includes methodological factors – including sample size, statistical significance, respondent age, HIV status, and bias – to consider when incorporating cervical cancer questions into an existing population-based survey.

SAMPLE SIZE ESTIMATION

Sample size is one of the most important methodological considerations in surveys as it affects the precision and stability of estimates, as well as the cost and duration of data collection. Available budget and data quality requirements must be considered during sample size estimation to ensure the data produced are useful and affordable. Sample size calculations require:

- The level of precision required (confidence interval),
- The level of confidence desired (P-value),
- The estimated (or known) proportion of the population in the specified target group,
- The predicted or estimated rate, or prevalence, of a specific indicator,

- The sample design effect (DEFT),
- The average household size,
- An adjustment for potential loss of sample households due to non-response.

The estimated screening coverage proportion and DEFT will have an impact on factors of data precision including standard error and confidence intervals.

The factors outlined above vary by indicator and context, therefore survey sample size is typically based on the indicators that require the largest sample sizes. For many large-scale, population-based surveys, these indicators are typically child mortality and contraceptive incidence; for HIV-focused surveys with biomarkers, the indicator will likely be viral load suppression. Survey administrators will need to work with their biostatisticians to determine if the survey's design provides a sufficient sample size to measure cervical cancer screening and treatment indicators, and make appropriate adjustments as needed.

Survey administrators should carefully consider respondent age, screening prevalence, and HIV prevalence when selecting questions and determining sample size.

INFLUENCE OF ESTIMATED SCREENING PREVALENCE ON SURVEY QUESTION SELECTION

Geographical differences in the availability, accessibility and acceptability of screening methods, and differences in HPV prevalence contribute to the large variation in cervical cancer rates around the world. Country-level screening prevalence will impact the precision of all indicators included in the modules. If screening prevalence is low, the sample size of screened participants may not be large enough to calculate precise estimates, particularly for indicators related to treatment.

While treatment prevalence is included as a core indicator, survey administrators should weigh the cost of including treatment-related questions against the estimated precision they can expect from their screening prevalence and sample size. However, even in areas with low screening and treatment prevalence, the modules include questions that can provide important information for programme planning. These include the knowledge and awareness questions (CPLUS1), the facilitator question (CPLUS3), the barrier questions (CPLUS6 and CPLUS7), and the self-collection acceptability question (CPLUS8); facilitator and barrier questions will require slight adaptation if being used without the filter screening and treatment questions.

RESPONDENT AGE

WHO recommends that women are screened for cervical cancer at least once in their lifetime between the ages of 30–49 years, or more frequently according to national guidelines [WHO, 2014]. However, population-based surveys typically target women aged 18 years and older, while some include adolescents as young as 10 years of age. Survey administrators should be mindful of respondent age when selecting questions, as the sample size of women aged 30–49 years may be too small to produce meaningful data on screening and treatment.

Administrators can provide training to survey enumerators on how to adapt the survey based on targeted respondent age. For example, if women younger than 30 years of age are not typically recommended to receive cervical cancer screening in a particular area but are included in a survey population, it may not be appropriate to ask them questions related to cervical cancer screening and treatment. However, adolescents and women younger than the recommended screening age could be asked knowledge and awareness question (CPLUS1), as well as the question related to acceptability of sample self-collection (CPLUS8).

SPECIAL CONSIDERATIONS FOR AREAS WITH HIGH PREVALENCE OF HIV

Women living with HIV/AIDS are at increased risk for chronic HPV infection and cervical cancer. HIV-positive women are also more likely to develop cancer earlier in life and die from the disease sooner than HIV-negative women. WHO recommends screening HIV-positive women for cervical cancer at the onset of sexual activity regardless of age, and re-screening HIV-positive women with a Negative/Normal screening test result every 3 years [WHO, 2014]. Therefore, theoretically, the questions in the Core and Core Plus modules are applicable to, and could be answered by, women of all ages who are either infected with HIV or living in areas with high rates of HIV, and who have initiated sexual activity.

Note that the modules do not include a question on HIV status. In order to appropriately disaggregate key indicators (e.g. screening prevalence) by HIV status, the HIV status of respondents (Positive, Negative or Unknown) will need to be collected.

ADDRESSING BIAS

As with any self-reported data, bias – including misclassification error (when a participant incorrectly identifies a response category) – is a concern. Misclassification error can be attributed to several

causes. For example, women may not receive enough information about the procedures conducted during gynecological visits and may confuse a pelvic examination with cervical cancer screening. Some women may incorrectly assume that treatments (e.g. antibiotics prescribed for infection) or procedures performed after screening are a form of treatment for precancerous or cancer. Social desirability bias can also contribute to overreporting, particularly during face-to-face interviews. For example, women may change their answers in order to "save face" or please the interviewer.

A number of validity studies have found that overreporting of cervical cancer screening is common. Studies have identified agreement values between self-report and medical records (predictive values) that range between 40% and 90% [M Howard, 2009; Eltoum IA, 2007; Rauscher GH, 2008]. Sociodemographic characteristics, including economic status, education level and ethnicity, can impact agreement values. Suggestions on adjustment factors to correct for overreporting, range from 10% to 60% depending on the context. Conducting a validation study can confirm the accuracy of self-reported screening and treatment data, and inform the adjustment factors required to correct for misclassification error.

VALIDATION

Criterion validation compares self-reported data with medical records to assess the accuracy of self-reported screening and treatment status. Measures of self-report include:

- Sensitivity: the proportion of positives that are correctly identified as positives;
- Specificity: the proportion of negatives that are correctly identified as negatives; and
- Positive and negative predictive values: the proportions of positive and negative results that are true positive and true negative results.

Measures of self-report can be calculated by determining report-to-record ratios. Multivariable regression analysis can be used to determine which demographic characteristics are independently associated with overreporting and underreporting of screening and treatment.

Access to medical records, an identifier to link screened and unscreened women to their medical records, and assurance that medical services were received in the same location as the validation study are required.

Conducting a validation study comes with ethical considerations. Informed consent that allows for access to medical records, privacy and confidentiality protections, safeguards for HIV positive women, and mechanisms for follow-up and report back are necessary.

COGNITIVE TESTING

Survey questions were designed to address key indicators in a standardized way. However, some terms may not be easily understood or translated, which can contribute to misclassification and response bias. Adaptation of language and concepts may be required to minimize error and produce high quality data. Cognitive testing is highly recommended because it provides insight into:

- How wording can be adapted;
- How the questions perform when administered; and
- Whether the questions measure the constructs intended.

Cognitive testing can also provide a foundation for follow-on qualitative research that investigates perceptions of cervical cancer and screening methods.

Cognitive testing was conducted during the development of the Core and Core Plus modules to test the reliability of the survey questions and introductory statements, as well as item analysis. All questions were tested except CPLUS7, which was added based on the findings of cognitive testing. The data collected were used to adjust question wording and order, and to provide recommendations for country-specific adaptation and translation. The results underscored the importance of cognitive testing for each country context to ensure the language and terminology were appropriate and easily understood.

ETHICAL REVIEW AND HUMAN SUBJECTS PROTECTIONS

All large-scale, population-based surveys maintain robust ethical research standards, and strict protocols concerning the protection of their survey respondents. While specifics will vary by survey and implementing agency, the fundamental principles of research ethics are fairly standard across surveys and are described in Table 2.4.

TABLE 2.4
Principles of research ethics

ETHICAL PRINCIPLE	EXPLANATION
Ethical Review	Research protocols including all questionnaires must be reviewed by an Institutional Review Board (IRB). Surveys will have their own regulations regarding which review boards they use; but most will seek approval from multiple sources. For example, DHS seeks approval from the ICF International Institutional IRB and an IRB within each host country [USAID, The DHS Program, 2016].
Informed Consent	Respondents must be informed of and have an understanding of some or all of the following: • The purpose and contents of the survey; • The interview process including estimated duration; • How the data collected will be used; • Confidentiality; • Voluntary participation*; • Any potential risk and/or benefit to the respondent; and be given • Contact information. Some countries or specific surveys will require written consent, while others may require only verbal consent. * Respondents must understand that participation in the survey is strictly voluntary, and that they can end the interview at any time.
Privacy during data collection	Interviews with respondents should be conducted as privately as possible. Privacy not only protects the respondent's personal information; it also helps minimize bias associated with self-report. Respondents may answer sensitive questions more accurately in a private setting.
Confidentiality throughout the research process	Confidentiality must be maintained throughout the data collection, input, analysis, reporting and dissemination processes. Thus confidentiality not only requires ethical interviewing practices, but ethical data management processes as well.
Test results to respondents (where applicable)	Some surveys collect biological samples from respondents for testing. In the majority of these surveys, this is considered ethically appropriate only if there is a plan for providing the results of the tests to the respondent.
Feedback to families and communities	Most surveys will have a plan for providing feedback to families and communities when applicable and appropriate. While sample sizes in many communities will be too small for statistical validity, local authorities still appreciate receiving feedback concerning the health and wellbeing of their communities [UNICEF, 2013].

RECOMMENDATION REGARDING HPV TESTING IN POPULATION-BASED SURVEYS

HPV DNA testing can be applied at a population level to estimate the prevalence of infection with specific HPV types in a population. Additionally, HPV serology can be used to detect antibodies against specific HPV types to identify past exposure. Data gathered in select, high-income countries from population-level HPV testing are being used to measure the impact of HPV vaccination programmes on reducing HPV infection and cervical abnormalities, as well as monitoring trends in the distribution of HPV types causing cervical cancer and precancerous lesions [Soderlund-Strans A, 2014; Markowitz LE, 2013]. HPV testing can be used as a screening test in national cervical cancer programmes and in cervical cancer research projects. However, population-based HPV testing is complex and requires financial, infrastructural, logistical, and human resources.

The potential utility of including HPV testing in population-based surveys must therefore be weighed against the considerable challenges and costs of doing so, particularly in low-resource settings, and in the context of competing health priorities. Additional resources have been included in the bibliography for reference.

As part of toolkit development, consideration was given to the potential role of, and methodological and operational considerations for incorporating HPV testing into population-based surveys. However, currently it is not recommended to include HPV testing in population-based surveys due to the complexity and cost which limit its utility. Furthermore, results of poorly controlled tests can be misleading and may confuse policy decisions.

IMPLEMENTATION TOOLS AND MATERIALS

SURVEY FORMATS

This subsection provides the Core and Core Plus Survey Modules in the typical survey format to assist in the incorporation of the modules – or specific questions within – into an existing survey. This format, which includes answer response coding categories and skip patterns, allows for a clear visualization of module flow.

A note on answer response coding categories: different population-based surveys handle response categories in different ways. For example: In the Demographic Health Survey (DHS), answer response categories are not read to respondents unless additional probing is required; whereas within the Stepwise Approach to Surveillance (STEPs) all response categories are read to respondents except "Don't Know" and "Refused". Survey administrators should provide instructions on this to their survey enumerators based on their practice.

CORE MODULE

The Core Module includes the Introductory Statement and the five Core questions (question numbers beginning with C).

INTRODUCTORY STATEMENT

Please read out the following: *"Now I'm going to ask you about tests a health-care worker can do to check for cervical cancer. The tests a health-care worker can do to check for cervical cancer are called a Pap smear, HPV test, and VIA test."*

———————————————————————————————————————

Pap smear supplementary statement: "For a Pap smear test, a health-care worker puts a small stick or swab inside the vagina to wipe the cervix, and sends the sample to the laboratory." (Optional: show reference images here)

HPV test supplementary statement: "For an HPV test, a small stick or swab is put inside the vagina to wipe the cervix, and the sample is sent to the laboratory. This can be done by a health-care provider or by a woman herself." (Optional: show reference images here)

VIA supplementary statement: "For a VIA test, a health-care worker puts vinegar on the cervix and looks to see if the cervix changes colour." (Optional: show reference images here)

If necessary, clarify terms by reading the following:

*"The **uterus** is where a baby grows when a woman is pregnant. The **cervix** connects the uterus to the vagina." (Optional: show image of cervix here)*

NO	QUESTION	ANSWER RESPONSES	CODING CATEGORIES	SKIPS
C1	Has a health-care worker ever tested you for cervical cancer?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 2 → 88 99	End Module
C2	When was your last test for cervical cancer?	Less than 1 year ago 1–2 years ago 3–5 years ago More than 5 years ago **(Do not read)** Don't know **(Do not read)** Refused	1 2 3 4 88 99	
C3	What was the result of your last test for cervical cancer?	Did not receive result Normal/negative Abnormal/positive Suspect cancer Inconclusive **(Do not read)** Don't know **(Do not read)** Refused	1 → 2 3 4 5 88 99	End Module
C4	Did you have any follow-up visits because of your last test result?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 2 88 99	
C5	Did you have any treatment to your cervix because of your last test result?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 2 88 99	
END MODULE				

CORE PLUS MODULE

The Core Plus Module includes the Introductory Statement, the five Core questions (question numbers beginning with C), and the additional eight optional questions (question numbers beginning with CPLUS).

INTRODUCTORY STATEMENT

Please read out the following: *"Now I'm going to ask you about tests a health-care worker can do to check for cervical cancer. The tests a health-care worker can do to check for cervical cancer are called a Pap smear, HPV test, and VIA test."*

Pap smear supplementary statement: "For a Pap smear test, a health-care worker puts a small stick or swab inside the vagina to wipe the cervix, and sends the sample to the laboratory." (Optional: show reference images here)

HPV test supplementary statement: "For an HPV test, a small stick or swab is put inside the vagina to wipe the cervix, and the sample is sent to the laboratory. This can be done by a health-care provider or by a woman herself." (Optional: show reference images here)

VIA supplementary statement: "For a VIA test, a health-care worker puts vinegar on the cervix and looks to see if the cervix changes colour." (Optional: show reference images here)

If necessary, clarify terms by reading the following:

*"The **uterus** is where a baby grows when a woman is pregnant. The **cervix** connects the uterus to the vagina." (Optional: show image of cervix here)*

NO	QUESTION	ANSWER RESPONSES	CODING CATEGORIES	SKIPS
CPLUS1	Have you heard of cervical cancer before?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 2 88 99	
C1	Has a health-care worker ever tested you for cervical cancer?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 2 → 88 99	 CPLUS7
CPLUS2	At what age where you first tested for cervical cancer?	Age **(Do not read)** Don't know **(Do not read)** Refused	 88 99	
C2	When was your last test for cervical cancer?	Less than 1 year ago 1-2 years ago 3-5 years ago More than 5 years ago **(Do not read)** Don't know **(Do not read)** Refused	1 2 3 4 88 99	
CPLUS3	What is the MAIN reason you had your last test for cervical cancer?	Part of routine examination Follow up on abnormal or inconclusive result Recommended by health-care provider Recommended by other source Experiencing pain or other symptoms Other (specify): _____ **(Do not read)** Don't know **(Do not read)** Refused	1 2 3 4 5 6 88 99	
CPLUS4	Where did you receive your last test for cervical cancer?	Doctors office Mobile clinic Community clinic Hospital Other (specify): _____ **(Do not read)** Don't know **(Do not read)** Refused	1 2 3 4 6 88 99	
C3	What was the result of your last test for cervical cancer?	Did not receive result Normal/negative Abnormal/positive Suspect cancer Inconclusive **(Do not read)** Don't know **(Do not read)** Refused	1 → 2 3 4 5 88 99	CPLUS8
C4	Did you have any follow-up visits because of your last test result?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 2 88 99	
C5	Did you receive any treatment to your cervix because of your last test result?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 2 → 88 → 99 →	 CPLUS6 CPLUS8 CPLUS8
CPLUS5	Did you receive the treatment to your cervix during the same visit as your last test for cervical cancer?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 → 2 88 → 99 →	CPLUS8 CPLUS8 CPLUS8

NO	QUESTION	ANSWER RESPONSES	CODING CATEGORIES	SKIPS
CPLUS6	What is the MAIN reason you did not receive treatment as a result of your last test result?	Was not told I needed treatment Did not know how/where to get treatment Embarrassment Too expensive Didn't have time Clinic too far away Poor service quality Afraid of the procedure Afraid of social stigma Cultural beliefs Family member would not allow it (specify the relationship of the member to the respondent) _____ Other (specify): _____ **(Do not read)** Don't Know **(Do not read)** Refused	1 → 2 → 3 → 4 → 5 → 6 → 7 → 8 → 9 → 10 → 11 → 12 → 88 → 99 →	CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8 CPLUS8
CPLUS7	What is the MAIN reason you have never had a cervical cancer test?	Did not know how/where to get the test Embarrassment Too expensive Didn't have time Clinic too far away Poor service quality Afraid of the procedure Afraid of social stigma Cultural beliefs Family member would not allow it (specify the relationship of the member to the respondent)_____ Other (specify): _____ **(Do not read)** Don't Know **(Do not read)** Refused	1 2 3 4 5 6 7 8 9 10 11 88 99	
CPLUS8	Would you be willing to collect a sample by yourself to test for cervical cancer either at a health-care clinic or in your home, if you were given instructions on how to collect the sample?	Yes No **(Do not read)** Don't know **(Do not read)** Refused	1 2 88 99	
END MODULE				

REFERENCE SHEETS

This subsection contains reference sheets for the Introductory Statement, each of the five Core questions, and each of the eight Core Plus questions. These reference sheets provide the purpose of the introductory statement or question, instructions on administration, "skip pattern" logic, definition of terms, details on numerators and denominators, and recommendations for adaptation when applicable. To see the full answer responses for each question, as well as how each question fits within the Core and Core Plus Modules, please see the modules in survey format.

INTRODUCTORY STATEMENT

REFERENCE SHEET FOR INTRODUCTORY STATEMENT

PRIMARY INTRODUCTORY STATEMENT: "Now I'm going to ask you about tests a health-care worker can do to check for cervical cancer. The tests a health-care worker can do to check for cervical cancer are called a Pap smear, HPV test, and VIA test." (Optional: show image of cervix here)
PAP SMEAR SUPPLEMENTARY STATEMENT: "For a Pap smear test, a health-care worker puts a small stick or swab inside the vagina to wipe the cervix, and sends the sample to the laboratory." (Optional: show reference images here)
HPV TEST SUPPLEMENTARY STATEMENT: "For an HPV test, a small stick or swab is put inside the vagina to wipe the cervix, and the sample is sent to the laboratory. This can be done by a health-care provider or by a woman herself." (Optional: show reference images here)
VIA SUPPLEMENTARY STATEMENT: "For a VIA test, a health-care worker puts vinegar on the cervix and looks to see if the cervix changes colour." (Optional: show reference images here)

Purpose:
To provide information to the respondent that will help them understand and accurately answer the survey questions

Instructions*:*
Only use the name and supplementary introductory statement of the cervical cancer test or tests (e.g. Pap, HPV, or VIA) provided in the survey country

Adaptation*:*
Alter terms as needed based on language and cultural context. For example:
Uterus = Womb
Vagina = Birth canal
Stick = Brush, Swab, or Instrument
VIA = Vinegar test

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality. Cognitive testing can provide insight into how best to translate the word, or adapt the introductory statement to appropriately address any sensitivities.

Using images when defining the cervix and testing methods helped some women better understand the introductory statement. Cognitively testing images before survey administration can provide insight into which images are most appropriate for the country context.

Where cervical or cervicovaginal sample self-collection (e.g. for HPV testing) screening methods are in use, consider adapting the primary introductory statement to read: "Now I'm going to ask you about tests that can be done to check for cervical cancer. The tests to check for cervical cancer are called a Pap smear, HPV test, and VIA test."

CORE QUESTIONS

REFERENCE SHEET FOR CORE QUESTION 1 (C1):

Has a health-care worker ever tested you for cervical cancer?

Purpose:
To measure the current screening prevalence

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response
Skip pattern: End module if respondent answers No.
If the survey has limited space for questions on cervical cancer, this question should be prioritized for inclusion before the other four core questions.

Definitions:
Health-care worker = Doctor, nurse, other trained health-care provider
Tested = Screened
Refused = Declined to answer the question

Indicator:
Percentage of women who have ever been screened for cervical cancer

- Numerator: Number of screened respondents
- Denominator: Total number of respondents

Adaptation:
Adapt language based on country context, for example:
Tested = Screened.

Conducting cognitive testing before survey administration can provide insight into which term is most appropriate for the country context.

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality. Cognitive testing can provide insight into how best to translate the word, or adapt the question to appropriately address any sensitivities.

Where cervical or cervicovaginal sample self-collection (e.g. for HPV testing) screening methods are in use, consider adapting the question to read: Have you ever been tested for cervical cancer?

Intersections with other sections of the toolkit:
Results from this question can be compared to data on screening coverage and service availability gathered using the tools and processes presented in Section 3, Patient and Programme Monitoring and Section 4, Facility-based Surveys.

REFERENCE SHEET FOR CORE QUESTION 2 (C2):

When was your last test for cervical cancer?

Purpose:
To measure the average number of years since a woman's last cervical cancer screening

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response

Definitions:
Last = most recent

Indicator:
Percentage of women who were last screened within a specific time frame.

- Numerator 1: Number of respondents who reported their last screening occurred <1 year ago
- Numerator 2: Number of respondents who reported their last screening occurred 1–2 years ago
- Numerator 3: Number of respondents who reported their last screening occurred 3–5 years ago
- Numerator 4: Number of respondents who reported their last screening occurred >5 years ago
- Denominator: Total number of screened respondents or total number of screened respondents within a specific age range

Note: "specific time frame" refers to each of the individual response choices (<1 year ago, 1–2 years ago, 3–5 years ago, >5 years ago). This indicator should be calculated for each response choice (see the module in survey format for answer responses in context).

Adaptation:
Adapt language based on country context:
Test = screening
Last = Most recent

Conducting cognitive testing before survey administration can provide insight into which term is most appropriate for the country context.

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality. Cognitive testing can provide insight into how best to translate the word, or adapt the question to appropriately address any sensitivities.

Survey enumerators can be trained on asking additional probing questions to help women link testing with other life events to improve recall.

REFERENCE SHEET FOR CORE QUESTION 3 (C3):

What was the result of your last test for cervical cancer?

Purpose:
1) To measure the percentage of screened women who received their last test result and; 2) To measure the proportion of specific results among screened women

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response
Skip pattern: End module if respondent answers DID NOT RECEIVE RESULT.

Definitions:
Normal = no indication of precancerous lesions
Abnormal = precancerous lesions suspected or confirmed
Suspected cancer = health-care provider suspects the patient has cancer
Inconclusive or Unclear = results could not be determined
Last = most recent

Indicator 1:
percentage of screened women who received a test result from their last screening

- Numerator 1: number of screened respondents who reported receiving their last screening test result
- Denominator 1: total number of screened respondents or total number of screened respondents within a specific age range

Indicator 2:
Percentage of women that received a specific result from their last screening.
Note: "specific result" refers to each of the individual response choices (e.g. Normal, Abnormal, Suspect cancer, etc.). This indicator should be calculated for each response choice (see modules in survey format for answer responses).

- Numerator 2.1: Number of respondents who reported receiving a normal result on their last screening test
- Numerator 2.2: Number of respondents who reported receiving an abnormal result on their last screening test
- Numerator 2.3: Number of respondents who reported receiving a suspect cancer result on their last screening test
- Numerator 2.4: Number of respondents who reported receiving an inconclusive result on their last screening test
- Numerator 2.5: Number of respondents who reported that they did not receive the results of their last screening test
- Denominator 2: total number of screened respondents or total number of screened respondents within a specific age range

Adaptation:
Adapt language based on country context:
Test = screening

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality. Cognitive testing can provide insight into how best to translate the word, or adapt the question to appropriately address any sensitivities.

Pap smear results are often characterized as NORMAL or ABNORMAL. VIA and HPV results are often characterized as NEGATIVE or POSITIVE. Alter terms as needed. For example:

Normal = negative

Abnormal = positive

Inconclusive = unclear

Not all countries will tell women that they are suspected for cancer, but rather simply refer for additional testing; it is therefore very important to cognitively test the "suspected cancer" response to ensure quality data collection.

Intersections with other sections of the toolkit:
Results from this question can be compared to programme data on screening results gathered using the tools and processes presented in Section 3, Patient and Programme Monitoring.

REFERENCE SHEET FOR CORE QUESTION 4 (C4):

Did you have any follow-up visits because of your last test result?

Purpose:
To measure the prevalence of screened women who received follow-up because of their last test result

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response

Definitions:
Follow-up visit = any subsequent visit related to the result of the test
Last = most recent

Indicator:
Percentage of women who received an abnormal, suspect cancer or inconclusive result who received follow-up.

- Numerator: Number of respondents who received follow-up because of their last test result
- Denominator: Total number of respondents who received the following result at last test: abnormal, suspect cancer, inconclusive

Note: A separate indicator for each result type (abnormal, suspect cancer, inconclusive result) can be calculated. Both the numerator and denominator for each separate indicator would be limited to one specific result type (abnormal, suspected cancer or inconclusive). For example: to calculate the indicator "Percentage of women who received an abnormal result on their last test who received follow-up", the numerator would be "number of respondents who received an abnormal result on their last test who received follow-up", and the denominator would be "total number of respondents who received an abnormal result at their last test".

Adaptation:
"Follow-up" can mean different things to respondents. Cognitive testing can provide insight into whether the term needs to be adapted and how best to translate this question.

Analysis in areas with low screening prevalence:
Note that in areas with low screening prevalence, the denominator for this indicator may be too low to offer meaningful estimates on follow-up.

Intersections with other sections of the toolkit:
Results from this question can be compared to data on screening coverage and service availability gathered using the tools and processes presented in Section 3, Patient and Programme Monitoring.

REFERENCE SHEET FOR CORE QUESTION 5 (C5):

Did you have any treatment to your cervix because of your last test result?

Purpose:
To measure the prevalence of screened women who received treatment because of their last test result

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response

Definitions:
Treatment to the cervix includes: cryotherapy (cryo), loop electrosurgical excision procedure (LEEP), cold knife conization (CKC), simple and radical hysterectomy, radiation, chemotherapy.

Indicator:
Percentage of women who received an abnormal, suspect cancer or inconclusive result who received treatment.

- Numerator: number of respondents who received treatment to their cervix because of their last test results
- Denominator: total number of respondents who received the following result at last test: abnormal, suspect cancer, inconclusive

Note: A separate indicator for each result type (abnormal, suspected cancer, inconclusive result) can be calculated. See the reference sheet for C4 for a relevant example.

Adaptation:
Adapt language based on country context:
Test = screening

Analysis in areas with low screening prevalence:
Note that in areas with low screening prevalence, the denominator for this indicator may be too low to offer meaningful estimates on treatment.

Intersections with other sections of the toolkit:
Results from this question can be compared to programme data on treatment gathered using the tools and processes in Section 3, Patient and Programme Monitoring.

CORE PLUS QUESTIONS

REFERENCE SHEET FOR CORE PLUS QUESTION 1 (CPLUS1):

Have you heard of cervical cancer?

Purpose:
To measure the prevalence of cervical cancer awareness

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response

Indicator:
Percentage of women who are aware of cervical cancer

- Numerator: Number of respondents who have heard of cervical cancer
- Denominator: Total number of respondents

Adaptation:
Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality. Cognitive testing can provide insight into how best to translate the word, or adapt the question to appropriately address any sensitivities.

REFERENCE SHEET FOR CORE PLUS QUESTION 2 (CPLUS2):

At what age were you first tested for cervical cancer?

Purpose:
To determine the age at first screening, for screened women

Instructions:
Do not read DON'T KNOW and REFUSED
Write in the age, writing only 1 number in each box. For example:
Age [3] [2]

Indicator:
Average age at first screening

Adaptation:
Adapt language based on country context:
Tested = Screened

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality. Cognitive testing can provide insight into how best to translate the word, or adapt the question to appropriately address any sensitivities.

Respondents may have difficulty recalling their age at first screening. Survey enumerators can be trained on asking additional probing questions to help women link testing with other life events to improve recall.

Analysis in areas with high rates of HIV:
Recommended age at first screening is lower for women living with HIV/AIDS than it is for HIV negative women. For women who are HIV positive, the WHO recommends screening for cervical cancer at the onset of sexual activity regardless of age, and re-screening (after a negative/normal result) every three years. See the Methodological Considerations section for more information.

REFERENCE SHEET FOR CORE PLUS QUESTION 3 (CPLUS3):

What is the MAIN reason you had your last test for cervical cancer?

Purpose:
To determine factors which most frequently facilitate screening

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response
If respondent provides another reason, record OTHER and write the reason in the space provided

Definitions:
Last = most recent
Abnormal = precancerous lesions suspected or confirmed
Inconclusive = results could not be determined
Health-care provider = doctor, nurse, community health worker

Indicator:
Percentage of women who report being motivated by a specific facilitator to receive their last screening test.

- Numerator: number of respondents motivated by a specific facilitator
- Denominator: total number of screened respondents

A separate indicator should be calculated by each specific facilitator listed as an answer category

Note: Separate indicators can be calculated for each facilitator listed as an answer category.

Adaptation:
Adapt language based on country context:
Test = screening

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality.

Include additional answer choices relevant to programme integration:
Part of HIV care
Recommended by HIV care provider
Part of family planning visit

Follow-on Research:
Findings from this question can provide preliminary insight into respondents' care-seeking behaviour and act as the foundation for follow-on qualitative research that explores barriers and facilitators to cervical cancer screening, treatment and care in more depth.

REFERENCE SHEET FOR CORE PLUS QUESTION 4 (CPLUS4):

Where did you receive your last test for cervical cancer?

Purpose:
To determine where women are being screened

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response
If respondent provides another location, record OTHER and write the location in the space provided

Definitions:
Last = most recent

Indicator:
Percentage of women who were screened at a specific location

- Numerator:
  number of screened respondents that received screening by each location
- Denominator:
  total number of screened respondents
  A separate indicator should be calculated for each location

Adaptation:
Adapt language based on country context:
Test = screening
Community Clinic = health post or health facility

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality.

If cervical or cervicovaginal sample self-collection (e.g. self-collection for HPV testing) is used as a screening method, consider adding SELF COLLECTION as a response option.

Include additional answer choices relevant to programme integration or service delivery point:
HIV care and treatment facility
Family Planning clinic

Adapt answer choices to capture more specific facility type:
Government health facility
NGO health facility
Private health facility

Intersections with other sections of the Toolkit:
Results from this question can be compared to programme and service availability data gathered using the tools and processes in Section 3, Patient and Programme Monitoring and Section 4, Facility-based Surveys.

REFERENCE SHEET FOR CORE PLUS QUESTION 5 (CPLUS5):

Did you receive any treatment to your cervix during the same visit as your last test for cervical cancer?

Purpose:
To measure the prevalence of single-visit approach services

Instructions:
Only ask this question in areas where single-visit approach services are provided.
Do not read DON'T KNOW and REFUSED
Skip pattern: Skip to question CPLUS8 if the respondent answers YES, DON'T KNOW or REFUSED

Definitions:
Single visit approach (also referred to as "See-and-Treat"): providing screening for precancerous lesions and needed treatment on the same day
Last = Most recent

Indicator:
Percentage of treated women who received single-visit approach services at their last test

- Numerator: number of respondents who received treatment during the same visit
- Denominator: total number of screened respondents who received treatment

Adaptation:
Adapt language based on country context:
Test = screening

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality.

When to include:
This question is only appropriate in countries with programmes providing the single visit approach.

Analysis in areas with low screening prevalence:
Note that in areas with low screening prevalence, the denominator for this indicator may be too low to offer meaningful estimates on the prevalence of single-visit approach services.

Intersections with other sections of the Toolkit:
Results from this question can be compared with programme and service availability data on the single-visit approach gathered using the tools and processes in Section 3, Patient and Programme Monitoring and Section 4, Facility-based Surveys.

REFERENCE SHEET FOR CORE PLUS QUESTION 6 (CPLUS6):

What is the MAIN reason you did not receive treatment as a result of your last test result?

Purpose:
To determine barriers to treatment

Instructions:
Only ask this question if the response to question C5 or CPLUS5 is NO
Read response options
Do not read DON'T KNOW and REFUSED
If respondent answers FAMILY MEMBER WOULD NOT ALLOW IT, ask WHO? and write in response
If respondent provides another barrier, record OTHER and WRITE IN barrier in the space provided
Skip pattern: Skip to question CPLUS8

Indicator:
Percentage of untreated women receiving an abnormal or positive result who identified a specific barrier to treatment

- Numerator: Number of respondents reporting each barrier as the MAIN barrier to treatment
- Denominator: Total number of screened respondents with abnormal, suspect cancer results who did not receive treatment

A separate indicator for each barrier response category should be calculated

Adaptation:
The response categories include examples that can be used as introductory statements, and to help survey enumerators accurately mark survey answers. Examples can be adapted based on language and cultural context. In order to ensure comparability across surveys, efforts should be made to keep the larger response categories as consistent as possible.

Follow-on Research:
Findings from this question can provide preliminary insight into respondents' care-seeking behaviour and act as the foundation for follow-on qualitative research that explores barriers and facilitators to cervical cancer screening, treatment and care in more depth.

REFERENCE SHEET FOR CORE PLUS QUESTION 7 (CPLUS7):

What is the MAIN reason you have never had a cervical cancer test?

Purpose:
To determine barriers to screening

Instructions:
Only ask if response to question C1 is NO
Do not read DON'T KNOW and REFUSED
Record one response
If respondent answers FAMILY MEMBER WOULD NOT ALLOW IT, ask WHO and write in response
If respondent provides another barrier, record OTHER and WRITE IN barrier in the space provided

Indicator:
Percentage of unscreened women who reported a specific barrier as the MAIN barrier to screening

- Numerator: number of respondents reporting each barrier as the MAIN barrier to screening.
- Denominator: total number of unscreened respondents

A separate indicator for each barrier response category should be calculated

Adaptation:
Adapt language based on country context:

Test = screening

Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality.

The response categories include examples that can be used as introductory statements, and to help survey enumerators accurately mark survey answers. Examples can be adapted based on language and cultural context. In order to ensure comparability across surveys, efforts should be made to keep the larger response as consistent as possible.

Follow-on Research:
Findings from this question can provide preliminary insight into respondents' care-seeking behaviour and act as the foundation for follow-on qualitative research that explores barriers and facilitators to cervical cancer screening, treatment and care in more depth.

REFERENCE SHEET FOR CORE PLUS QUESTION 8 (CPLUS8):

Would you be willing to collect a sample by yourself to test for cervical cancer either at a health-care clinic, or in your home, if you were given instructions on how to collect the sample?

Purpose:
To measure the prevalence of respondents willing to administer sample self-collection

Instructions:
Do not read DON'T KNOW and REFUSED
Record one response
Reference images can be used to illustrate the process of self-collection to ensure understanding

Indicator:
Percentage of women willing to administer sample self-collection

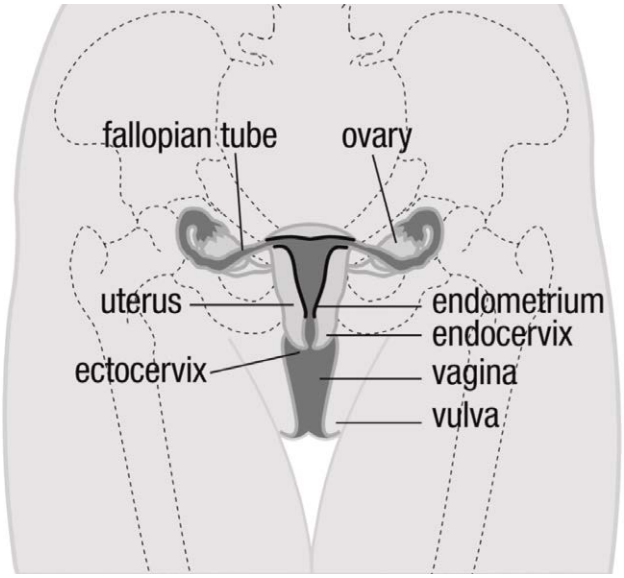
- Numerator: number of respondents reporting willingness to administer self-collection
- Denominator: total number of respondents

Adaptation:
Cancer may be difficult to translate in some languages, and/or a taboo subject in some cultural contexts. Both of these challenges can compromise data quality.

When to include:
This question is most appropriate for use in areas where cervical or cervicovaginal sample self-collection has been introduced and/or where pilot studies or randomized controlled trials are planned.

IMAGE EXAMPLES FOR USE WITH INTRODUCTORY STATEMENTS

THE CERVIX



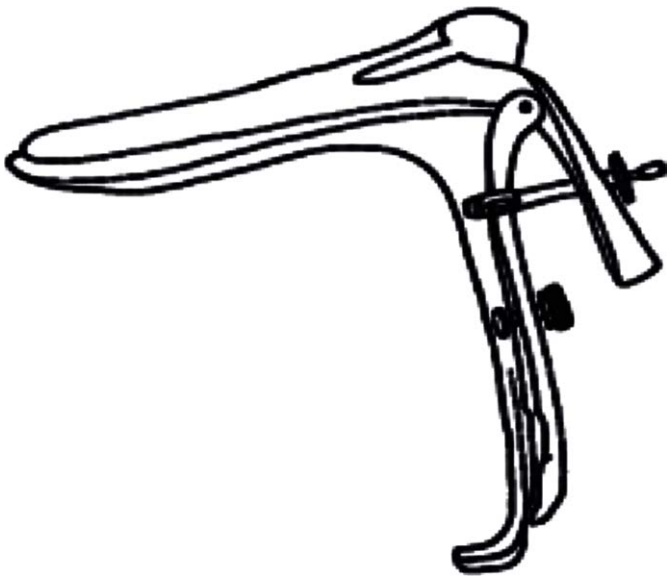
Source: WHO – Comprehensive Cervical Cancer Control: A guide to essential practice (http://apps.who.int/iris/bitstream/10665/144785/1/9789241548953_eng.pdf)

INSTRUMENTS FOR CERVICAL SAMPLING
SPATULA, BRUSH AND BROOM

(a) Wooden spatula
(b) Endocervical brush
(c) Plastic brush / broom

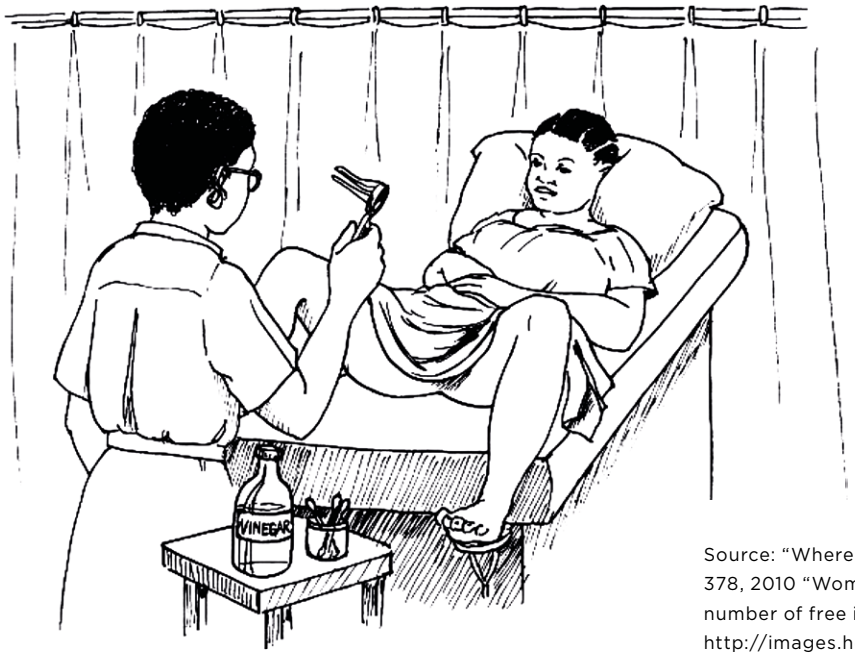
Source: WHO – Comprehensive Cervical Cancer Control: A guide to essential practice (http://apps.who.int/iris/bitstream/10665/144785/1/9789241548953_eng.pdf)

SPECULUM



Source: Hesperian.org. Hesperian has a number of free images and images for purchase available online: http://images.hesperian.org/libraryhome.tlx.

CERVICAL CANCER TESTING METHODS
PAP SMEAR AND HPV TEST AND VIA



Source: "Where Women Have No Doctor," 2014, Chapter 24, Page 378, 2010 "Women's Health Exchange, Issue 1." Hesperian has a number of free images and images for purchase available online: http://images.hesperian.org/libraryhome.tlx

EXAMPLE TABLE SHELLS

Before developing an analysis plan the design of the existing survey which has incorporated the modules must be taken into account – with special attention paid to sampling. In most cases, the precision of information gathered from the cervical cancer questions will not be the driver of the sampling design and sample size. As discussed in methodological considerations and highlighted in several question reference sheets, a low screening prevalence in the survey country may result in sample sizes too small to conduct some analyses with precision.

This subsection provides several examples of tables that may be considered when developing an analysis plan. There are a number of potential ways to analyse and display the data generated by these questions in the context of a larger survey, and it is highly recommended that survey methodologists and biostatisticians be consulted to determine the limitations of these data.

Note that demographic characteristics and the questions used to gather them may differ by parent survey, and screening and treatment options will differ by country. Survey administrators should adapt the content and structure of the tables based on country context and need.

EXAMPLE 1

Where cervical cancer programme managers are interested in determining screening prevalence, describing trends in screening access, or identifying populations that may need to be targeted for screening awareness generation and demand creation, analysis should include the responses to the following survey questions:

From Core Module
- Question C1: Has a health-care worker ever tested you for cervical cancer?

From Parent Survey
- How old are you?
- What is your current marital status?
- What is the highest level of school you have attended? What is the highest grade completed at that level?

Note: If the programme is operating in a high HIV prevalence country, the programme manager may also wish to include an HIV status variable from the parent survey in this analysis to better understand how well the HIV-positive population is being reached.

The analysis of these variables could then be presented in a table such as the following:

EXAMPLE TABLE SHELL 1:
Screening status by select demographic characteristics

EVER SCREENED			
Demographic characteristics	**Unscreened**	**Screened**	**Total**
	Percentage (95% CI)		
Overall			100%
Age			
Group 1			100%
Group 2			100%
Group 3			100%
Group 4			100%
Residence			
Urban			100%
Rural			100%
Marital status			
Single			100%
Married			100%
Cohabitating			100%

Demographic characteristics	Unscreened	Screened	Total
Widowed			100%
Divorced			100%
Education level			
Category 1			100%
Category 2			100%
Category 3			100%

EXAMPLE 2

If screening prevalence is found to be low, programme managers may wish to better understand the barriers women in different demographic subgroups face with regards to accessing screening services. This issue may be elucidated by analysis of responses to the following questions:

From Core Plus Module
- Question CPLUS7: What is the MAIN reason you have never had a cervical cancer test?

From Parent Survey
- How old are you?
- What is your current marital status?
- What is the highest level of school you have attended? What is the highest grade completed at that level?

The analysis of these variables could then be presented in a table such as the following:

EXAMPLE TABLE SHELL 2:

Barriers to cervical cancer screening by select demographic characteristics

Note on adaptation: A table with the same basic format can be easily adapted to examine factors which act as barriers to treatment.

BARRIERS TO CERVICAL CANCER SCREENING											
Demographic characteristics	Lack of knowledge	Embar-rassment	Too ex-pensive	Didn't have time	Poor service availability	Poor Ser-vice quality	Afraid of Procedure	Cultural beliefs	Family member	Other	Total
Percentage (95% CI)											
Overall											100%
Age											
Group 1											100%
Group 2											100%
Group 3											100%
Group 4											100%
Residence											
Urban											100%
Rural											100%
Marital status											
Single											100%
Married											100%
Cohabitating											100%
Widowed											100%
Divorced											100%
Education level											
Category 1											100%
Category 2											100%
Category 3											100%

EXAMPLE 3

Suppose that programme managers wish to gain information on the prevalence of abnormal or suspect cancer screening test results in different subgroups of the population in order to assist with targeting and programmatic decision-making. Or they want to better understand whether or not women are receiving their screening test results. They would thus want to analyse responses to the following questions:

From Core Module
- Question C3: What was the result of your last test for cervical cancer?

From Parent Survey
- How old are you?
- What is your current marital status?
- What is the highest level of school you have attended? What is the highest grade completed at that level?

Note: If the programme is operating in a high HIV prevalence country, the programme manager may also wish to include an HIV status variable from the parent survey in this analysis.

EXAMPLE TABLE SHELL 3:

Screening test results by select demographic characteristics

RESULT OF LAST CERVICAL CANCER SCREENING TEST AMONG WOMEN WHO RECEIVED A RESULT					
Demographic characteristics	**Normal**	**Abnormal**	**Inconclusive**	**Suspect cancer**	**Total**
		Percentage (95% CI)			
Overall					100%
Age					
Group 1					100%
Group 2					100%
Group 3					100%
Group 4					100%
Residence					
Urban					100%
Rural					100%
Marital status					
Single					100%
Married					100%
Cohabitating					100%
Widowed					100%
Divorced					100%
Education level					
Category 1					100%
Category 2					100%
Category 3					100%

EXAMPLE 4

Where a programme manager wants to ensure that they are adhering to current guidelines or achieving current targets with regards to the treatment of women with precancerous lesions or invasive cervical cancer, they would want to look at responses to the following questions:

From Core Module
- Question C3: What was the result of your last test for cervical cancer?
- Question C4: Did you have any follow-up visits because of your last test result?
- Question C5: Did you receive any treatment to your cervix because of your last test result?

And if Single Visit Approach is a programmatic strategy, the programme manager may also want to look at:
From Core Plus module
- Question CPLUS5: Did you receive the treatment during the same visit as your last test for cervical cancer?

As presented in the example below, it may only be necessary to present the 'yes' responses to some of the above questions.

EXAMPLE TABLE SHELL 4:

Prevalence of follow-up and treatment by last screening test result

FOLLOW-UP AND TREATMENT FOR CERVICAL CANCER			
Result	**Any follow up**	**Any treatment**	**Treatment received during single visit**
Overall			
Abnormal			
Inconclusive			
Suspect cancer			

SECTION 3

PATIENT AND PROGRAMME MONITORING

INTRODUCTION

Programme monitoring is a systematic means of capturing service delivery data, analysing it with appropriate aggregation and reporting tools, and using the resulting information to make strategic choices regarding programme management. The guiding information and tools in this section are intended to support comprehensive cervical cancer prevention programme monitoring using a facility-level health management information system (HMIS), while ensuring that the information gathered also supports clinical decision-making and patient management.

The package of operational resources presented in this section is applicable to programmes implementing or planning to implement any of the screen-and-treat strategies presented in the *WHO guidelines for screening and treatment of precancerous lesions for cervical cancer prevention* [WHO, 2014]:

1. Screen with VIA alone

2. Screen with cytology or HPV test, followed by colposcopy

3. Screen with HPV test, followed by VIA

4. Screen with HPV test alone

Additionally, this package is applicable to programmes employing an updated traditional strategy, referenced in *Integrating HPV testing in cervical cancer screening programs: a manual for program managers* [PAHO, 2016]: screen with HPV test, followed by cytology, and referral of those positive on both to colposcopy and biopsy to determine treatment.

Many countries have in place monitoring and evaluation (M&E) strategies, patient monitoring protocols, and health management information systems; but these may be nascent, lacking standardization, or lacking cervical cancer data and indicators. The tools and guiding information in this section are not intended to replace existing systems, but rather to build on and improve them.

Reasons to Invest in Improved Data Collection and Reporting:

- **What gets measured gets done**
- **If you don't measure results, you can't tell success from failure, and you can't identify gaps and find solutions**
- **If you can't see success, you can't learn from it and share it.**
- **If you can't see success, you can't reward it.**
- **If you can't reward success, you are tolerating failure.**
- **If you can't recognize failure, you can't correct it.**
- **If you can demonstrate cost effective results, you can scale up.**

Note on New Screening and Treatment Technologies: This section addresses the screening and precancerous lesion treatment technologies currently recommended by WHO. As technologies continue to advance, the tools included can be adapted to address these new technologies. Screening and triage techniques and adjuvants such as digital cervicography or smart-phone-based mobile colposcopy, can be monitored by adapting and expanding the VIA- and colposcopy-related data elements and indicators. These tools may also be adapted to include new precancerous lesion treatment technologies, such as thermal coagulation, by adapting the cryotherapy-related elements. Where these new technologies are being piloted and tested, it is vital that findings be made available in order to strengthen the global evidence base.

Patient and programme monitoring is a systematic means of capturing service delivery data, analysing it with appropriate aggregation and reporting tools, and using the resulting information to make strategic choices regarding programme management.

ROLES AND RESPONSIBILITIES FOR M&E

Before initiating cervical cancer prevention programmes, it is necessary to ensure availability of the resources needed to monitor, evaluate, and apply course corrections to the programme. Table 3.1 outlines the major M&E roles and responsibilities in a typical cervical cancer programme.

TABLE 3.1
Roles and responsibilities for M&E

ENTITY	M & E ROLE/RESPONSIBILITY
Community: Clients	Participate by providing information to providers based on previous screening or treatment history, demographics and contact information. Receive feedback about the use of cervical cancer prevention services in their community.
Facility Staff: Providers (Doctors, Nurses, and Midwives), Data Entry Clerks, and Charge Nurses	Providers are the primary data collectors, completing the source document (client forms) during the client visit. Data entry clerks help with transcription from the completed client form to the register and the calculation of indicators on the monthly summary form. Charge Nurses should meet with providers to review and use data for decision-making at the facility level. Discuss challenges related to the programme highlighted by the routine service delivery statistics.
Subnational Staff: Supervisors and Staff	Ensures that data are checked and verified through periodic data quality assessments or audits, ideally carried out during supportive supervision visits. Helps facility providers understand the data collected and its implications. Helps and trains facility staff to complete monthly reporting. Aggregates facility-level data captured on Monthly Summary Forms into an electronic system such as DHIS 2[1] (some facility staff may also have this capacity) for data visualization and use. Works with national and regional/provincial government to develop subnational and facility-level targets related to Screening Rate and Coverage based on trends and programme direction.
National and Regional/Provincial Government	Uses aggregate data from facilities and subnational level to guide overall cervical cancer prevention programming. Uses data to inform budget allocations. Identifies lessons learned and makes strategic recommendations and decisions. Ensures that feedback on the data flows back to district supervisors. Works with subnational staff to develop subnational and facility-level targets related to Screening Rate and Coverage based on trends and programme direction.
Programme Technical Staff and Implementing Partners	Collaborates with M&E team on indicator development and selection to guide programme implementation. End-user of the information for decision-making. Participates in monitoring visits. Advises MoH on progress towards national targets. Informs the development of targets. Provides technical assistance to MoH to implement and improve the programme based on M&E results.
M&E Point Person(s)	Coordination role. Provides training to providers and other programme staff on standardized data collection. Leads analysis and synthesis of data at the subnational and national levels. Provides results against targets and benchmarks to donors and the MoH as well as the individual facilities generating the data. Helps establish and build ownership and buy-in for the overall M&E system. Develops and updates manuals, guidelines, training materials, and reports for programme M&E. Informs the development of targets.

[1] DHIS 2 is a flexible, web-based open-source information system with visualization features, charts and pivot tables.

INDICATORS

The primary purpose of monitoring cervical cancer prevention programmes is to support continuous quality improvement of services. Timely data collection, aggregation, and review, leveraging the national HMIS, allows for prompt remediation of problems, and should thus be included in regular programme activities [WHO, 2013]. Successful integration of cervical cancer data into existing national HMIS requires standardized data practices – including a standardized set of indicators. A list of suggested indicators can be found in list format in Table 3.2, with expanded information on method of measurement in reference tables in the package of Implementation Tools and Materials at the end of this section. These indicators are calculated using data derived from the provision of screening and treatment services, and demonstrate quantitatively how a programme is progressing towards expected outputs and outcomes.

The purpose of the list of suggested indicators and accompanying guiding information in this section is to support the selection of appropriate routine service delivery and programme indicators that can generate meaningful, actionable data for decision-making. The indicator should be used by ministries of health, implementing partners, and other stakeholders to establish M&E systems for new cervical cancer programmes, or can be cross-referenced by existing programmes to enhance M&E systems through the adaptation, deletion or addition of indicators according to need.

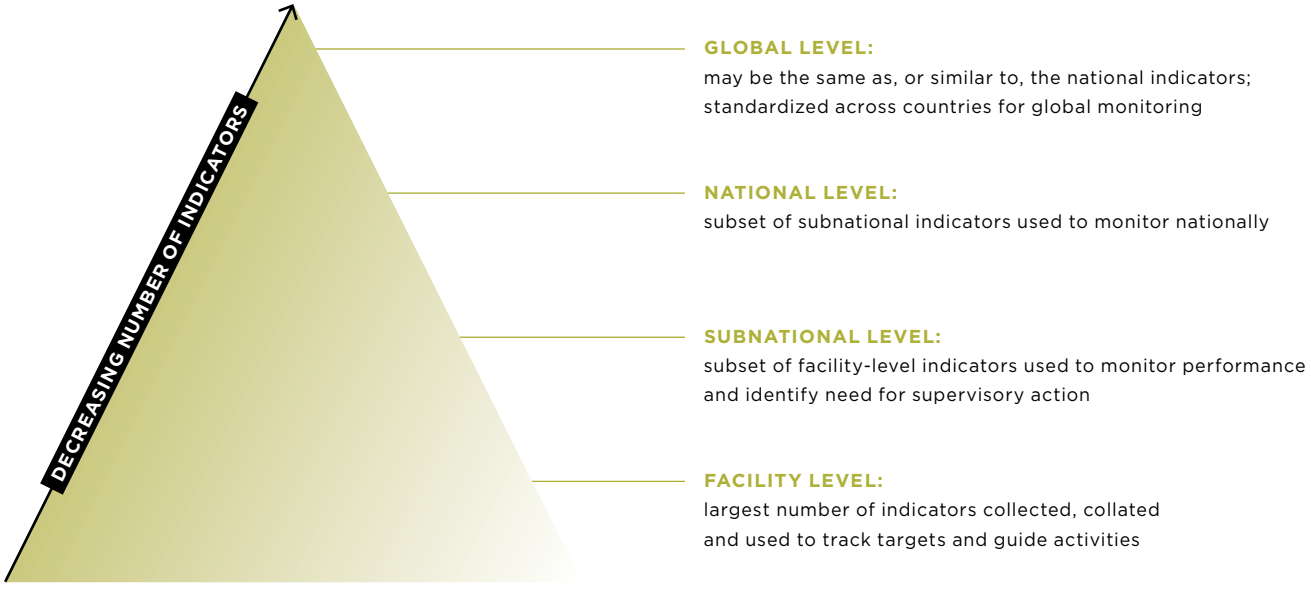
Data required to calculate the indicators should be collated and reported on a monthly, quarterly, or annual basis as appropriate, and analysed in a timely manner. The required variables for the numerators and denominators of the percent-based indicators should be integrated into the existing HMIS for consistency of calculation. With regular reporting and monitoring, appropriate indicator targets and benchmarks can be determined for facilities, districts (or relevant subnational unit), and national programmes.

INDICATORS AT GLOBAL, NATIONAL, SUBNATIONAL, AND FACILITY LEVELS

Service delivery data are generated at the health facility level, and these primary data will inform facility, subnational and national decision-making; however, not all indicators are used at all levels. For example, while knowing the number of postponed cryotherapy cases is useful at the facility level to improve communication and outreach to clients, those data are not necessarily useful at the subnational or national levels.

Figure 3.1 demonstrates graphically how information flows from the facility level to the national level, and is used to report globally.

FIGURE 3.1
Indicator aggregation and flow of strategic information



GLOBAL-LEVEL INDICATORS

WHO recommends the collection of performance, result and impact indicators to monitor cervical cancer prevention and control programmes nationally and globally. The performance indicators recommended by WHO are related to coverage, screening, and treatment of precancerous lesion. The recommended impact indicator assesses mortality.

See Section 2, Population-based Survey Modules for tools and guiding information to support the collection of data to measure the prevalence of screening through population-based surveys.

Data sources for the global coverage and impact indicators fall outside the scope of routine service delivery data collection and aggregation. The indicator for coverage is approached in the Section 2 of this toolkit, Population-Based Survey Modules; and the impact indicator requires population-level or sentinel hospital-based cancer registry data to calculate, placing it outside the scope of this toolkit. Cancer registries support collection of data on cancer cases and deaths that can be analysed to inform disease occurrence and trends in a defined population. For more information on cancer registration, consult the website of the Global initiative for Cancer Registry Development (GICR) of the International Agency for Research on Cancer (IARC) [WHO, 2014].

Additional guidance on the WHO core global indicators for coverage and impact can be found in *Comprehensive cervical cancer control: a guide to essential practice* [WHO, 2014] and *Monitoring national cervical cancer prevention and control programmes: quality control and quality assurance for visual inspection with acetic acid (VIA-) based programmes* [WHO, 2013].

NATIONAL-LEVEL INDICATORS

National programmes calculate country-level indicators using data aggregated from monthly facility summary forms that are fed into the national health management information system (HMIS). The indicators monitored at national level are typically a small set of core indicators which provide a focused yet comprehensive overview that informs programme tracking and management.

SUBNATIONAL-LEVEL INDICATORS

A larger set of indicators is monitored at the subnational level to provide a broader view of programme activities (e.g. training, facility-based surveillance, etc.) and routine service delivery. Using these indicators, subnational units can review facility-level data and trends and respond rapidly to any issues identified.

FACILITY-LEVEL INDICATORS

The majority of indicator data are collected at the facility level using a client form and a register or logbook. Data from these sources are summarized through a monthly summary form, which then allows calculation of indicators at the facility level as well as reporting of summary data to subnational and national levels. At the subnational, national and global levels, data aggregated across facilities are used to calculate key indicators for monitoring.

PRIORITIZING INDICATORS

A large set of indicators which measure more than just the basic programmatic aspects will provide useful information; however, the collection, management and analysis of data for additional indicators requires significantly more time and resources. Additionally, information systems can only collect a finite amount of information in a consistent and usable manner. Fewer fully disaggregated and well analysed indicators, collected consistently using aligned data tools, can improve programmes more than a large amount of poorly collected, poorly linked, and unused information [WHO Consolidated Strategic Information Guidelines, 2015]. This trade-off should be carefully considered when building a nationally standardized set of indicators. With this consideration in mind, the indicators in this section are organized into **Global (G), Core (C)**, and **Optional (OPT)** categories. Table 3.2 presents the short forms of the indicators to illustrate their placement in the overall cascade of indicators and continuum of care. To best support prioritization, reference tables with expanded detail on the method of measurement for each indicator can be found in the package of Implementation Tools and Materials at the end of this section.

TABLE 3.2
List of global, core, and optional indicators

INDICATOR G = Global; C = Core; OPT = Optional	WHAT IT MEASURES
SCREENING	
C0.0 Number Screened	Number of women screened [by screening visit type and age group or range] in a given time period
G1.0 Screening Rate	Percentage of women aged 30-49 years screened for the first time in a 12-month period
C1.0 Screening Rate	Percentage of women within the target age range screened for the first time in a given time period
OPT1.0.1 Screening Test Failure*	Percentage of women whose sample was tested more than once due to error
OPT1.0.2 Inadequate Sample*	Percentage of women whose sample was inadequate for screening test completion
OPT1.0.3 Received Results*	Percentage of women who received screening test results
OPT1.1 Screened Within Target Age Range	Proportion of total women screened for the first time who were within the target age range
OPT1.2 Progress Toward Target Screening Rate	Percentage of screening target reached in the last year, quarter, month
OPT1.3 Rescreened Within Target Interval	Percentage of women who were rescreened within the recommended screening interval
OPT1.4 Precancerous Lesion Post-treatment Follow-up	Percentage of women treated for precancerous lesions who return for a 1-year post-treatment follow-up screening test
SCREENING RESULTS AND REFERRALS	
G2.0 Screening Test Positivity Rate	Percentage of screened women aged 30-49 years with a positive result in a 12-month period
C2.0 Screening Test Positivity Rate	Percentage of [first time] screened women [within the target age range] who received a positive screening result in a given time period
OPT2.0.1 Precancerous Lesion Cure Rate	Percentage of women who received a negative screening result at their 1-year post-treatment follow-up
C2.1 Received Triage Examination**	Percentage of screen-positive women who received a triage examination
C2.2 Triage Examination Percent Positive **	Percentage of women who received a triage examination with a positive result in a given time period
OPT2.2.1 Triage Examination Provision**	Percentage of screen-positive women referred for triage who attended the triage visit and received a triage examination
OPT2.2.2 Triage Referral Compliance**	Percentage of screen-positive women referred for triage who attended the triage visit
OPT2.2.3 Referred for Triage**	Percentage of screen-positive women who were referred for triage
OPT2.2.4 Received Triage Results**	Percentage of women who received triage examination results
OPT2.3 Screened Women Requiring Treatment**	Percentage of women screened [for the first time] who received a positive triage examination result in a given time period
C2.4 Suspected Cancer Cases	Percentage of [first time] screened women [within the target age range] with suspected cervical cancer
TREATMENT AND REFERRALS	
G3.0 Treatment Rate	Percentage of screen-positive women who have received treatment in a given time period
C3.0 Treatment Rate	Percentage of screen-positive women who have received treatment in a given time period
OPT3.1 Precancerous Lesion Treatment	Percentage of screen-positive women with lesions eligible for cryotherapy or LEEP who received that treatment
OPT3.2 Post-treatment Complication	Percentage of women receiving cryotherapy or LEEP who returned with a post-treatment complication

* Applicable to screening, triage, or diagnostic methods requiring sample collection and processing (HPV testing, Pap smear/cytology, biopsy)

** Applicable to screening strategies which include a triage step between screening and treatment (e.g. HPV test followed by VIA; HPV test or cytology followed by colposcopy)

*** Applicable to HPV testing with client self-sampling

INDICATOR G = Global; C = Core; OPT = Optional	WHAT IT MEASURES
OPT3.3 Treatment with Cryotherapy	Percentage of screen-positive women with lesions eligible for cryotherapy who received cryotherapy
OPT3.3.1 Single Visit Approach Rate	Percentage of VIA-positive women with lesions eligible for cryotherapy treated during the same visit
OPT3.3.2 Postponed Cryotherapy	Percentage of VIA-positive women with lesions eligible for cryotherapy who postponed cryotherapy
OPT3.3.3 Cryotherapy After Postponement	Percentage of VIA-positive women with lesions eligible for cryotherapy who received cryotherapy after postponing
OPT3.3.4 Did Not Return for Cryotherapy	Percentage of VIA-positive women with lesions eligible for cryotherapy who did not return for cryotherapy after postponing
OPT3.4 Treatment for Large Lesions	Percentage of screen-positive women referred for large lesions who received LEEP
OPT3.4.1 Large Lesion Treatment Eligibility	Percentage of screen-positive women referred for large lesions who were eligible for LEEP
OPT3.4.2 Large Lesion Referral	Percentage of screen-positive women referred for large lesions (lesions not eligible for cryotherapy)
OPT3.5 Suspected Cancer Treatment/ Follow-up	Percentage of women with suspected invasive cancer who completed appropriate treatment or follow-up
OPT3.5.1 Suspected Cancer Referral Compliance	Percentage of screen-positive women referred for suspected cancer who attended the referral visit
OPT3.5.2 Suspected Cancer Referral	Percentage of screen-positive women referred for suspected cancer
OPT3.6 Colposcopy Referral Compliance	Percentage of screen-positive women referred for colposcopy who attend the colposcopy visit
OPT3.6.1 Colposcopy Referral	Percentage of screen-positive women referred for colposcopy
OPT3.7 Confirmed Cancer	Percentage of screen-positive women referred for suspected cancer who were diagnosed with cancer
PROGRAMME AND SERVICE DELIVERY	
C4.0 Proportion of Facilities Providing Services	Proportion of health facilities that are providing the cervical cancer services they are designated to provide
OPT4.1 Trained Service Providers	Proportion of service providers trained in screening and treatment services who are providing services
OPT4.2 Static Facility Screenings	Proportion of cervical cancer screenings conducted at a static facility
OPT4.2.1 Mobile Screenings	Proportion of cervical cancer screenings conducted through routine outreach using a mobile approach
OPT4.3 Community Campaigns	Number of community campaigns (including mass screening campaigns/periodic outreaches) carried out
OPT4.4 Self-sampling***	Proportion of screening tests conducted using a self-collected sample
FACILITY AND LABORATORY LINKAGES	
OPT5.0 Results Turn-around Time*	Number of days between sample collection and return of results to screened women
OPT5.0.1 Sample Submission Time*	Number of days between sample collection and transport of sample to laboratory
OPT5.0.2 Laboratory Processing Time*	Number of days between laboratory receipt of sample and return of results to facility
OPT5.0.3 Results Communication Turn-around Time*	Number of days between facility receipt of results and return of results to screened women
HIV SERVICE INTEGRATION	
OPT6.0 First Time Screening for Women with HIV	Percentage of women enrolled in HIV Care and Treatment who were screened for cervical cancer for the first time
OPT6.1 PITC Service Provision	Percentage of women with previously unknown HIV status who received provider-initiated testing and counseling (PITC) and now know their status
OPT6.2 Linkage to HIV Services	Percentage of clients linked to HIV Care and Treatment after receiving an HIV positive result through PITC

INDICATOR DENOMINATORS

There are two broad categories of denominators used to calculate the indicators: population-level denominators and programme-level denominators.

Population-level denominators: The denominator is the number of people in a group, regardless of whether or not those people have encounters with the health-care system. This type of denominator is relevant to the Screening Rate indicator. When calculating the Screening Rate, the denominator should be the number of women within the target age range in the facility catchment area for facility level statistics, and the number of women within the target age range captured within the district or national census for subnational or national statistics.

Programme-level denominators: This type of denominator is derived from the cervical cancer data system, and is relevant to the majority of suggested indicators. For example, in the Screening Test Positivity Rate indicator, the denominator is the aggregate number of women (in the target age range) who were documented as having received a screening test (for the first time in their life) within the specified time period.

INDICATOR DISAGGREGATION

Disaggregation uses data elements to break up aggregate indicator data into component parts in order to identify and highlight differences that may exist [WHO Consolidated Strategic Information Guidelines, 2015]. To ensure that the strategic information generated by the programme monitoring system is useful for programme management and service improvement, and sensitive to the populations most vulnerable to cervical cancer, recommended data elements for disaggregation are noted for each indicator.

Common elements for disaggregating cervical cancer data include:

- **Age group or age range**: inside the target age range, outside the target age range; or discrete age ranges based on national epidemiology or data practices (e.g. <20, 20–29, 30–39, 40–49, >49)
- **Geography or Location**: Province, region, district, or other appropriate administrative boundaries to facilitate key analysis and feedback; rural or urban (*Note: Geography, Facility Level and/or Facility Name should be considered required disaggregates at the subnational and national level, and therefore have not been noted for each indicator*)
- **HIV status**: HIV positive, HIV negative, or HIV unknown
- **Screening method** (*where multiple methods are in use*): VIA, VILI, HPV testing, cytology
- **Screening visit type**: first time screenings, post-treatment follow-up at 1 year, routine rescreening (after last screening was negative)
- **Service delivery point**: Static facility, mobile outreach *(Note: where applicable, this element may be expanded to include settings or points of integrated service delivery, such as HIV Care and Treatment, Family Planning, STI Services, etc. to enhance usability of key indicators*)

Indicator disaggregation requires the collection of key data elements in a standardized format at the individual client level, integration of those key elements into standardized summary and reporting processes, and methods to ensure data integrity throughout summary and aggregation. Standardized forms for data collection, aggregation and reporting (such as the examples shown in the Implementation Tools and Materials at the end of this section) coupled with training and regular data reviews are key to ensuring high-quality data. Where accessible, an electronic HMIS linked to electronic patient record systems can significantly enhance data quality and reduce staff burden through automated data aggregation and indicator calculation.

The same principles applied to prioritizing indicators should be applied to determining what indicators should be disaggregated by which data elements – *quality* should be emphasized over *quantity*. Examining how disaggregation impacts an indicator's scope can help to inform whether the information gained is worth any additional investment in data collection, management, and quality assurance. For example:

At its base level, the Screening Test Positivity Rate indicator (indicator C2.0 in Table 3.2) is intended to monitor screening test quality by measuring the percentage of screened women with a positive screening test result in a given time period. As shown in Table 3.3, in order to be sensitive to the population most vulnerable to cervical cancer, the indicator definition can be restricted to women *within the target age* range while still fulfilling its intended purpose of monitoring test quality:

TABLE 3.3
Screening test positivity rate – target ages only

INDICATOR AND COMPONENTS	VALUE
C2.0 SCREENING TEST POSITIVITY RATE	**8.8%**
C2.0 NUMERATOR: Total Number of Women Within Target Age Range with a POSITIVE Screening Test Result	35
C2.0 DENOMINATOR *(Also C0.0)*: Total Number of Women Screened Within Target Age Range	400

Programmes may aim to provide screening services only to those women within a target age range; in which case, the indicator as calculated above may provide all the information needed. However, if women outside of the target age range are provided with screening services, calculating as above leaves significant gaps. Broadening the basic indicator starts to create a different view, as shown in Table 3.4:

TABLE 3.4
Screening test positivity rate – all ages

INDICATOR AND COMPONENTS	VALUE
C2.0 SCREENING TEST POSITIVITY RATE	**12.5%**
C2.0 NUMERATOR: Total Number of Women with a POSITIVE Screening Test Result	100
C2.0 DENOMINATOR *(Also C0.0)*: Total Number of Women Screened	800

The indicator as written in Table 3.4 is still fulfilling its purpose, while also providing more comprehensive information that can support forecasting of required resources; however, because the sensitivity to the vulnerable target population at the aggregate level has been lost, disaggregation would make this information more useful. In some cases, disaggregating the numerator alone provides enough information. As shown in Table 3.5, disaggregating the numerator alone by Age Group only allows calculation of the overall Screening Test Positivity Rate and the contribution of each Age Group to the overall rate:

TABLE 3.5
Numerator disaggregation

INDICATOR AND COMPONENTS		VALUE	PROPORTION OF TOTAL
C2.0 SCREENING TEST POSITIVITY RATE		**12.5%**	
C2.0 NUMERATOR: Total Number of Women with a POSITIVE Screening Test Result		**100**	
Age Group Disaggregation	Within Target Age Range	35	35.0%
	Outside of Target Age Range	65	65.0%
C2.0 DENOMINATOR *(Also C0.0)*: Total Number of Women Screened		**800**	

The limited disaggregation highlights a very high proportion of positive tests in women outside of the target age range; however, additional information is still needed to contextualize the issue. Going one step further – as in Table 3.6 – and disaggregating both the numerator and denominator by Age Group fills key gaps by enabling monitoring of the overall Screening Test Positivity Rate and the Screening Test Positivity Rate for each Age Group (including those most vulnerable). Each group's contribution to total positives and total number screened can also be easily calculated:

TABLE 3.6
Numerator and denominator disaggregation

INDICATOR AND COMPONENTS		VALUE	PROPORTION OF TOTAL
C2.0 SCREENING TEST POSITIVITY RATE		**12.5%**	
Age Group Disaggregation	Screening Test Positivity Rate – Within Target Age Range	8.8%	
	Screening Test Positivity Rate – Outside of Target Age Range	16.3%	
C2.0 NUMERATOR: Total Number of Women with a POSITIVE Screening Test Result		**100**	
Age Group Disaggregation	Within Target Age Range	35	35.0%
	Outside of Target Age Range	65	65.0%
C2.0 DENOMINATOR *(Also C0.0)*: Total Number of Women Screened		**800**	
Age Group Disaggregation	Within Target Age Range	400	50.0%
	Outside of Target Age Range	400	50.0%

Fully disaggregated indicator data increases the complexity of data collection, management and aggregation processes; however, as seen in this example, disaggregation can enable identification of significant issues requiring further investigation – in this case, the high proportion of women screened outside of target age group, and the high test positivity rate for that population – which would not have been identified using either of the simple aggregate indicators. It should be noted that a suggested optional indicator (OPT1.1 Screened within the Target Age Range) would identify the high proportion of women screened outside of the target age range; however OPT1.1 would not identify the high test positivity rate in that population.

Ultimately, the approach taken to generating strategic information of appropriate sensitivity and scope is dependent on programme context, priorities, and resources; programmes must weigh information needs for patient and programme monitoring against the capacity for staff and systems to collect and manage quality data. Harmonization with existing approaches must also be considered. Programmes with nascent monitoring systems may be best served by fully disaggregating the Core indicators by key elements, while limiting disaggregation of additional indicators above the facility level. Again, quality over quantity should be a key guiding principle when establishing data practices.

AGE RANGES

As seen in the example above, the age range or group is often a key indicator component or disaggregate as it informs programme effectiveness in reaching the target population and supports monitoring of those most vulnerable to cervical cancer. The target age range used in calculating or disaggregating relevant Core and Optional indicators should be based on national cervical cancer epidemiology and guidelines. In high HIV-prevalence contexts, adaptation of target age range based on HIV positive status should align with national or global guidelines.

In order to allow for cross-country comparison and global monitoring, WHO designates that globally-reported screening data should reflect only women within the target age group of 30–49 years; however, WHO recommends that all HIV positive women should receive a VIA screening when they are first identified as HIV positive, regardless of age.

When the WHO-recommended and national target age ranges for screening do not align, data systems should be designed with the capacity to calculate the global Screening Rate, Test Positivity Rate and Treatment Rate indicators as defined in order to report.

HIV STATUS

Given that the highest burden of cervical cancer is found in countries with high HIV prevalence, the majority of the indicators recommend disaggregation by HIV status to ensure that information is sensitive to the high-risk population of women (and girls) living with HIV. In countries where HIV prevalence is relatively low, disaggregation by HIV status may not be of programmatic importance and its inclusion may be reconsidered.

As shown in the example below (Table 3.7), disaggregation by HIV status allows for the calculation of a Screening Test Positivity Rate specific to HIV-positive women. In this case, disaggregation by HIV status *and* Age Group highlights a plausible

correlation between HIV positive status and the high proportion screened *outside the target age range*, and the high test positivity rate noted in previous example.

TABLE 3.7
Example disaggregation by HIV status and age group

INDICATOR AND COMPONENTS		VALUE			PROPORTION OF TOTAL
		WITHIN TARGET AGE RANGE	OUTSIDE TARGET AGE RANGE	TOTAL	
C2.0 SCREENING TEST POSITIVITY RATE		**8.8%**	**16.3%**	**12.5%**	
HIV Status Disaggregation	Screening Test Positivity Rate – HIV Positive	14.3%	17.1%	16.5%	
	Screening Test Positivity Rate – HIV Negative	7.1%	8.0%	7.2%	
	Screening Test Positivity Rate – Women with Unknown HIV Status	10.0%	16.0%	14.0%	
C2.0 NUMERATOR: Total Number of Women with a POSITIVE Screening Test Result		**35**	**65**	**100**	
HIV Status Disaggregation	HIV Positive	10	47	57	57.0%
	HIV Negative	20	2	22	22.0%
	HIV Unknown	5	16	21	21.0%
C2.0 DENOMINATOR *(Also C0.0)*: Total Number of Women Screened		**400**	**400**	**800**	
HIV Status Disaggregation	HIV Positive	70	275	345	43.1%
	HIV Negative	280	25	305	38.1%
	HIV Unknown	50	100	150	18.8%

SCREENING VISIT TYPE

Many programmes aggregate data on services delivered into simple overall totals for monitoring, without consideration of the client's screening history. Aggregation by all screenings would thus include women who attended a screening visit for the first time, women who attended a screening visit in follow-up to treatment for precancerous lesions, and women who attended a routine rescreening visit following a previous negative screening test. At the facility level and above, this aggregate number is important for understanding the demand for screening and treatment services and planning for the human and material resources needed to meet that demand.

Other programmes consider only data relevant to first-time screenings in aggregate totals and indicators. Focusing on first-time screenings is key to accurately monitor whether a programme is reaching those at highest risk (i.e. those in the target age range who have never been screened before) and informs disease burden in the screening naïve population. The indicators recommended by WHO focus on first-time screenings in order to align to the goals of most programmes (e.g. to screen all women in the target age range at least once), and because this information is key to a coordinated global cervical cancer response.

Both aggregation strategies provide valuable information; however, neither strategy alone supports comprehensive monitoring:

- Monitoring total screenings without further disaggregation provides an imprecise view of the screening test positivity rate across risk subsets of the target population (i.e. women screened for the first time, rescreened after previous negative test, or post-treatment follow-up)

- Monitoring treatment resulting from total screenings without further disaggregation hinders a programme's ability to monitor treatment success and estimate efficacy. Critical issues, such as a high percentage of women requiring retreatment due to a positive result on a 1-year post-treatment follow-up screening, would be missed (see example in Table 3.8).

- It is vital that all women who require follow-up and treatment (i.e. those screen-positive and/or triage-positive) receive follow-up and treatment. Limiting indicator counts to first-time screenings alone does not allow for the monitoring of this key patient care and outcomes component.

- Restricting indicators to first-time screenings provides only part of the information necessary to advocate and plan for programme resources to meet the full demand, and change management including policies.

The ideal, and more complex, approach integrates both strategies by aggregating data related to all screenings into one total (e.g. Total Women Screened, Total with a Positive Result on a Screening Test, etc.), while maintaining the ability to disaggregate that total into its component "screening visit types": first-time screening, rescreening, and post-treatment follow-up screening. The value in this approach can be seen below in Table 3.8, where the extremely high Test Positivity Rate at post-treatment follow-up screenings would have been missed without disaggregation of the numerator and denominator by Screening Visit Type.

TABLE 3.8
Example disaggregation by screening visit type (and HIV status)

INDICATOR AND COMPONENTS		NUMBER AND PERCENTAGE				PROPORTION OF TOTAL
		HIV +	HIV -	HIV Unk	TOTAL	
C2.0 SCREENING TEST POSITIVITY RATE		**14.7%**	**2.0%**	**9.0%**	**12.5%**	
Screening Visit Type Disaggregation	Test Positivity Rate – Screened for the First time	12.5%	2.5%	7.8%	**10.7%**	
	Test Positivity Rate – Screened at 1 year post-treatment	53.3%	0.0%	40.0%	**40.0%**	
	Test Positivity Rate – Routine Rescreens	12.5%	0.0%	0.0%	**10.0%**	
C2.0 NUMERATOR: Total Number of Women with a POSITIVE Screening Test Result		**81**	**1**	**18**	**100**	
Screening Visit Type	Number screened for the first time who had a positive result	60	1	14	**75**	**75.0%**
	Number screened 1 year post-treatment who had a positive result	16	0	4	**20**	**20.0%**
	Number routinely rescreened (after previous negative screening) who had a positive result	5	0	0	**5**	**5.0%**
C2.0 DENOMINATOR *(Also C0.0)*: Total Number of Women Screened		**550**	**50**	**200**	**800**	
Screening Visit Type	Number screened for the first time	480	40	180	**700**	**87.5%**
	Number screened 1 year post-treatment	30	10	10	**50**	**6.3%**
	Number of routine rescreens	40	0	10	**50**	**6.3%**

STANDARDIZING TERMINOLOGY: SCREENING TEST RESULTS

In order to monitor patients and programmes, the terminology for classifying the results of cervical cancer screening tests must be standardized across service delivery points. Providers and others responsible for data collection and management should receive training on how to accurately classify and aggregate screenings and their results.

VIA RESULTS

For the purpose of monitoring, the possible results for VIA are categorized into the following three options:

1. Negative

2. Positive (eligible for cryotherapy/not eligible for cryotherapy)

3. Positive, suspected cancer

Options 2 and 3 are both considered a positive result. Women with a VIA screening (or triage) test result of positive or positive, suspected cancer are therefore considered screen-positive (or triage-positive) for indicator calculation purposes. Positive results are broken into precancer and suspected cancer because the care pathways for each are different, with suspected cancer requiring further evaluation (colposcopy, biopsy, diagnosis) before treatment options can be considered. Clinical definitions can be found in *Comprehensive cervical cancer control: a guide to essential practice* [WHO, 2014].

Inconclusive or Indeterminate VIA result

Inconclusive (or indeterminate) VIA results should be rare, but can impact the count for positive results. The options for addressing an inconclusive result include:

1. Reapply the acetic acid.

If the result is still inconclusive:

2. Seek immediate consultation from a colleague or distant consultation.

If options 1 and 2 are unavailable

3. Classify the result as positive.

PAP SMEAR/CYTOLOGY RESULTS

For the purpose of monitoring, the possible results for cytology are categorized into the following two options:

1. Normal (negative for intraepithelial lesions or malignancy)

2. Abnormal (any epithelial cell abnormality[1])

In order to standardize language across indicators, any epithelial cell abnormality is considered a positive result. While it is possible to determine degrees of abnormality and even identify precancer from cytology, both precancer and suspected cancer are captured as a positive result. Women with an abnormal result on a Pap smear screening test are therefore considered *screen-positive*. If feasible, disaggregating relevant indicators can provide the more granular results information.

Programmes employing a screening strategy of cytology, followed by colposcopy may choose to adapt the indicators to capture the ASCUS[2] screening result threshold recommended for referral to colposcopy triage.

HPV TEST RESULTS

For the purpose of monitoring, the possible results for an HPV test are categorized into the following three options:

1. Negative

2. Positive

3. Retest required

STANDARDIZED TERMINOLOGY AND DATA QUALITY

Errors in reporting results which impact the quality of monitoring data can occur when:

1. Screening visits where cancer is suspected based on initial speculum examination are not classified as "completed screening visits";

2. A screening that could not be completed due to cervicitis or other infection is counted as a "completed screening"; and

3. Suspected cancer cases are not classified as positive screening results.

As an example, a woman attends a VIA screening visit. During the initial speculum examination, and prior to the application of acetic acid, the provider identifies a cauliflower-like mass, determines that invasive cancer is suspected, and recommends that the woman be referred for further evaluation and diagnosis.

Although acetic acid was not applied in this case, the defined purpose of the screening was fulfilled (i.e. to identify individuals with increased probability of having either the disease itself or a precursor of the disease); and therefore, the visit should be considered a completed screening, with a result of positive, suspected cancer. Had the provider not classified the visit as a completed screening, it would not be counted in the aggregate total number of screenings for the facility.

If, alternatively, a provider identifies cervicitis during an initial speculum examination and therefore does not apply acetic acid, but rather prescribes medication and asks the woman to return for screening, the defined purpose of the screening visit was not fulfilled and should not be considered a completed screening. Furthermore, the provider should document when acetic acid has not been applied at a VIA screening visit.

Screening is intended to identify women at risk for cervical cancer *before* they experience symptoms; however, a woman may present for a screening *because* she is experiencing symptoms. In cases such as these, it is important for the provider to document that the woman was experiencing symptoms, in addition to any action taken, in order to conduct appropriate patient follow-up and to understand trends in seeking screening services.

[1] Please refer to the Bethesda classification system for clinical definition of results: Nayar R, Wilbur DC (eds): The Bethesda system for reporting cervical cytology: definitions, criteria, and explanatory notes, ed 3. New York, Springer, 2015.

[2] Atypical squamous cells of undetermined significance, 2001 Bethesda System

STANDARDIZING TERMINOLOGY: REFERRAL, POSTPONEMENT, AND LOSS TO FOLLOW-UP

After a woman receives a positive screening result, there may be the need for treatment postponement or referral – which are most often the points where women are lost to follow-up. These terms may be defined in several ways. The indicators in Table 3.2 and the sample Monthly Summary Forms in the Implementation Tools and Resources at the end of this section use the following definitions:

Postponed treatment:

- Client refusal to receive immediate treatment due to personal reasons; or
- Provider/facility inability to provide immediate treatment due to a temporary lack of resources.

Referral:

- Referral to a second facility for a service the referring facility is not designated to provide; or,
- Referral to a second facility for a service the referring facility is designated to provide, but cannot due to a temporary or extended lack of resources.

Referrals may be initiated at the screening site (for example, a screen-positive woman with large lesions not eligible for cryotherapy is referred for LEEP) or at the treatment site (a woman referred for LEEP is found to have suspected cancer at the LEEP visit and is referred for further evaluation). The term "referral" may also be used to classify a movement between different providers or points of service within the same facility.

In the absence of global standards defining the point in time when an incomplete referral or a failure to return for postponed treatment transitions to the "lost to follow-up" category, programmes must develop their own standardized definitions. For example, "lost to follow-up" may be defined as "client does not return for scheduled referral visit"; or "client does not return for scheduled treatment visit after postponement". More robust time-bound definitions, which consider the impact of disconnected facilities and poor referral feedback mechanisms, may classify a woman as lost to follow-up if she does not comply with a referral or attend a treatment visit within 6 months of her screening visit.

In order to ensure both high-quality data and high-quality patient care, nationally standardized definitions for "treatment postponement", "referral", and "lost to follow-up" should be developed based on health system structure, referral mechanisms, and screening and treatment algorithms. Providers and data entry and management staff should be trained how to appropriately classify referrals, treatment postponement, and loss to follow-up.

MONITORING SCREENING AND TREATMENT STRATEGIES: CLASSIFYING PROCEDURE PURPOSE

Several recommended screening strategies incorporate a triage examination step (following the primary screening test) to determine the need for treatment and the type of treatment for which the woman is eligible [WHO, 2014]. The list of indicators includes several which are specific to monitoring the additional complexities of screen-triage-treatment strategies. Other more general indicators may require additional consideration or adaptation. Information and examples to guide the adaptation of non-specific indicators can be found in the reference tables and other tools in the Implementation Tools and Materials at the end of this section.

Many countries establishing only an organized national programme, or transitioning from one screening strategy to another, may have multiple screening methods and/or strategies employed across existing providers; for example, VIA may be used as a primary screening test and as a triage test; cytology may also be used as a primary screening test, a triage/secondary screening test, and where VIA is contraindicated.

When VIA or cytology are used for multiple purposes within one programme, the terminology for classifying results does not change; however, the addition of an accurate classification of procedure purpose (e.g. screening or triage) is necessary to avoid quality issues once data are aggregated.

VISUAL ASSESSMENT FOR TREATMENT: AN ADDITIONAL CONSIDERATION FOR CLASSIFYING PROCEDURE PURPOSE

In addition to its use as primary screening test or as a triage test, VIA may be used as visual assessment for treatment (VAT) in screen- or triage-positive

women referred for precancerous lesion treatment. As an example, a woman receives a VIA screening, and is found to be VIA-positive with a large lesion that is ineligible for cryotherapy. She is referred to a second facility for potential LEEP treatment of the large lesion. At the second site, the LEEP provider uses acetic acid to visualize the lesion and confirm eligibility prior to LEEP treatment. Misclassification of the VAT as a VIA screening test would result in two screenings being counted for the woman in the aggregate total for the programme, thereby negatively impacting the quality of data for monitoring.

The applicability and use of colposcopy for multiple purposes (e.g. as triage to determine if precancerous lesion treatment is required, as further evaluation for large lesions or suspected cancer, as VAT and/or biopsy guidance, etc.) similarly requires vigilance in classifying and recording the reason for colposcopy referral and the purpose the procedure serves.

Ensuring consistent and accurate documentation of procedure purpose through standardized terminology and data collection forms, training, and supportive supervision is key to ensuring appropriate patient management, and avoiding duplicate-counting and other data quality issues.

SPECIAL CONSIDERATIONS FOR AREAS WITH HIGH HIV PREVALENCE

Countries with a high HIV prevalence have additional factors to consider when adapting the suggested indicators and establishing standardized data practices, such as:

- How does the nationally recommended screening interval for women with HIV positive or unknown status compare with that for HIV negative women? How does this effect data collection and aggregation?

- Is the screening target age range for women with HIV positive or unknown status different from that of HIV negative women? How can suggested indicators best be adapted or disaggregated in order to generate useful information?

- Level of cervical cancer and HIV programme integration.

Additionally, deviation from globally accepted benchmarks will need to be considered in the context of HIV prevalence. For example, in a general population with low HIV prevalence the benchmark for VIA test positivity rate is 5–25% (see Table 3.9) [ACCP, 2004]. In a general population with high HIV prevalence, the VIA positivity rate may be higher than 25%, particularly in a screening naïve population.

These considerations have been highlighted throughout this section; additional resources, such as the UNAIDS global AIDS monitoring 2017 guidance[1] or the WHO guide for monitoring and evaluating national HTC programmes[2] are available to further guide monitoring of integration with HIV services.

[1] See: http://www.unaids.org/sites/default/files/media_asset/2017-Global-AIDS-Monitoring_en.pdf

[2] See: http://apps.who.int/iris/bitstream/10665/44558/1/9789241501347_eng.pdf

ROUTINE SERVICE DELIVERY DATA COLLECTION, AGGREGATION, AND REPORTING

This section describes a basic health information system through which data flows from the client to the national programme level by way of interlinked tools aligned to clinical needs and national indicators (Figure 3.2). The tools described here include an individual client form, a collating register or logbook, and a summary form for reporting and entry into HMIS. In addition to these three basic tools, programmes should develop additional forms or logbooks to capture more detail on referrals and follow-up, laboratory processes (e.g. for quality control), supply chain processes, and invasive cancer management; however, because these additional tools are highly dependent on programme context, they are not addressed in depth in this section.

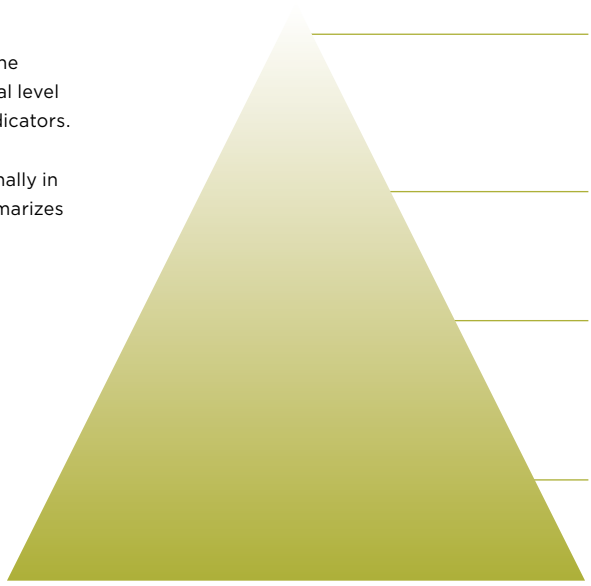
FIGURE 3.2
Flow of information through data collection and aggregation tools

MONTHLY SUMMARY FORM:
Summarizes client visits at a facility over the previous month. Aggregated at subnational level and fed directly into HMIS and national indicators.

ANNUAL SUMMARY FORM:
Used to report globally and monitor nationally in countries with nascent programmes. Summarizes client visits over the previous year.

REGISTER:
Facility-level logbook where the Client Screening Form data are summarized. Creates aggregated data source for capture in HMIS (via summary form).

CLIENT SCREENING FORM:
Documentation of client visits and data on screening, referral and treatment.



GLOBAL LEVEL:
may be the same as, or similar to, the national indicators; standardized across countries for global monitoring.

NATIONAL LEVEL:
subset of subnational indicators used to monitor nationally.

SUBNATIONAL LEVEL:
subset of facility-level indicators used to monitor performance and identify need for supervisory action.

FACILITY LEVEL:
largest number of indicators collected, collated and used to track targets and guide activities.

The Implementation Tools and Materials at the end of this section provide practical resources for reference during the design and improvement of basic data collection and aggregation tools – with the aim of increasing the availability of high-quality data for patient and programme monitoring.

CLIENT LEVEL DATA COLLECTION

CLIENT SCREENING AND TREATMENT FORMS

The first point of data collection is the Client Form. Client forms are used by providers and facility staff to document client visits and collect data on screening, referral, and precancerous lesion treatment. Data elements captured on the client form are entered into the register, which is ultimately used to complete the monthly summary form. Nationally-standardized client forms ensure that the same data are collected at all sites in a format that enables information exchange, aggregation and reporting. All client data captured on these forms and in the register should be stored in an area with controlled access, or in a secure database or electronic system, to protect client confidentiality.

Client forms should meet the following criteria for ease of use and standard data collection:

- The form should be laid out in chronological order to follow the client flow through health facilities and visits, from intake to screening to precancer treatment or referral.
- The form should trigger a comprehensive assessment, standard clinical decision-making, and improved continuity of care.
- All data elements should provide either clinical management support to the provider and/or feed into the indicators. Every additional data element added to the form has an associated cost for collection, collation, analysis, form reproduction, etc.
- Specific fields to capture client details, HIV status, visit type, and screening and treatment procedures through answer choice options are preferred over unstructured notes written freehand by a provider.
- The layout should be user-friendly for providers and data entry staff.

CLIENT LEVEL DATA ELEMENTS

The minimum data elements captured on the client form fall into several broad categories applicable to any screening and treatment strategy, and are comprised of elements required to:

- uniquely identify the point of service (e.g. facility name, provider name)
- uniquely identify the client and allow for future contact (e.g. client unique ID, client phone number)
- support clinical decision-making at the current visit (e.g. date of last menstrual period, screening history)
- monitor the provision of services (e.g. screening visit type, screening completed, treatment provided)
- monitor the next steps in client care and service provision (e.g. treatment eligibility, referral)

The Client Form Data Elements Checklist (in the Implementation Tools and Materials) contains the set of minimum data elements required to monitor the core indicators for screening and treatment of precancerous lesions. While these minimum data elements are sufficient to support standard clinical decision-making, additional optional elements for capturing more detailed aspects of patient care and to support the calculation of additional optional indicators have been included for consideration. This checklist can be used by countries and programmes to 1) develop new client screening and treatment forms; 2) determine whether existing screening and treatment forms are adequate; and 3) provide options for improving or modifying current forms.

In order to ensure usability of the client form for both patient and programme monitoring, those tasked with ensuring that all data collection tools are uniform across sites should work with service providers in the implementation of the checklist. Once a client form has been developed, it is vital that it be field-tested before being formally rolled out at a national programme level.

Programmes should also develop, or adapt existing, additional purpose-driven client data forms such as referral forms and laboratory linkage forms (e.g. forms capturing key client data to accompany laboratory samples).

The Implementation Tools and Materials provide sample forms which illustrate options on how minimum data elements, and some optional elements, can be structured to collect client level data. The Implementation Tools and Materials also contain an abridged data dictionary with expanded data element definitions which can be used as a companion to the checklist tools when incorporating data elements into an electronic medical record, register or HMIS.

Considerations for Programmes Utilizing Self-collected Samples for HPV testing

When developing data collection forms for programmes utilizing self-collected (home-based or facility-based) samples, it is crucial to ensure that the necessary data elements are captured on a client level form – whether this form is completed by the client and returned with her sample to the facility, or whether the form is completed by facility staff when the woman returns her sample.

In a strategy where women do not submit their self-collected sample for HPV testing to facility personnel directly (e.g. women place their sample in a drop box, or the sample is mailed to the facility), it is essential that the minimum data elements be captured on a form (or label) which accompanies the sample.

FACILITY LEVEL DATA COLLATION

REGISTER

Screening and Treatment Registers or logbooks. These are facility-level documents used to collate a subset of data from the client form, and are not to be confused with a national cancer registry.[1] A subset of data from the register is fed into a summary form, which matches the reporting requirements of the

[1] A cancer registry collects detailed information about cancer patients and the treatments they receive, and stores it in an electronic format (CDC).

MOH and other stakeholders. Register data can also be used by providers monitor patients and by facility data staff to calculate or validate the indicators for monitoring.

The register should use the same wording and flow as the client form. Data elements used for disaggregation should be built in, as should a method to support tallying (e.g. rows for column totals at the bottom). Once a register has been developed, it is vital that it be field-tested before being formally rolled out at a national level.

The register should be designed to collate data according to the indicator components that are captured on a Monthly Summary Form, which will ultimately be captured and aggregated above the facility level (ideally in an electronic HMIS). To avoid lost information and to improve accuracy, the daily completion of registers is recommended.

The organization of registers for different programmes will differ primarily based on screening methodology. For example, the register for a cytology programme must be able to capture information about an individual client over time because screening results are not provided immediately. This longitudinal (or client-based) register must be organized by client name, and record time elements such as: date the sample was sent to the laboratory; date the results were received; date the client was notified of results; and date treatment or referral was provided. Registers for a VIA-based programme, on the other hand, may only record client information at one point in time because screening, results, and ideally treatment are offered in the same visit for the majority of clients. Therefore, a VIA register is typically a simple visit-based register, organized by date.

REGISTER DATA ELEMENTS

The Implementation Tools and Materials at the end of this section provide a Register Data Elements Checklist which includes a set of minimum, and additional optional, data elements that can be used to develop a register if one does not currently exist, or to determine whether current registers include all necessary fields. As with the Client Form Data Elements checklist, the Register Data Elements Checklist should be used by the individuals tasked with ensuring that all data collection tools are uniform across sites.

The Implementation Tools and Resources also provide sample registers which illustrate how data elements can be organized to collate individual client data at the facility level. Depending on the strategy for service delivery, programmes may wish to have separate registers for screening and for precancerous lesion treatment, or may wish to incorporate cervical cancer data elements into other existing registers for integrated service delivery.

DATA AGGREGATION AND REPORTING

MONTHLY SUMMARY FORM

Each month, trained personnel should record cleaned, verified and accurate totals from the facility Register on the Monthly Summary Form for transmission to a central point (e.g. district office, national programme office, data hub) on an established schedule. Health-care providers and clinic staff who have been trained in data documentation, cleaning, and reporting are best equipped to prepare the summary. If healthcare providers and clinic staff have not completed the necessary training, the summary can be prepared jointly with an M&E advisor as part of the data review and verification process of supportive supervision, until providers are comfortable preparing the summary independently.

The sample Monthly Summary Forms in the Implementation Tools and Materials at the end of this section illustrate how client visits can be summarized over the previous month to feed directly into the national HMIS for calculation of the national indicators. If a country programme already has a monthly summary form in place, it can be cross-referenced with the sample Monthly Summary Form and the indicators suggested in Table 3.2 to ensure that the existing form captures all necessary data. A MoH, M&E staff member responsible for data collection should work with an M&E technical advisor to adapt and implement the Monthly Summary Form.

ANNUAL SUMMARY FORM

The sample Annual Summary Forms in the Implementation Tools and Materials at the end of this section provide country programmes, in the early stages of development and implementation, with a simplified standardized data aggregation tool for reporting on core indicators. This form is intended to be an intermediate option to satisfy fundamental programme monitoring goals while the more robust system described in this component is being established. The Annual Summary Form can be used by M&E staff at the facility and subnational levels to aggregate and report national indicator data; and by M&E staff at the national level as a tool for reporting global indicator data annually to WHO. The core indicator C4.0 (Proportion of Facilities Providing Services) is not included in the sample Annual Summary Form; this is because it may be most feasible for the aggregation of data for this indicator to occur at the national level, rather than the subnational level, during initial phases of programme implementation.

DATA ANALYSIS, VISUALIZATION, AND USE

The ultimate purpose of data collection is to provide policy-makers, programme decision-makers, and service providers with the information needed to make informed decisions, improve programmes, and provide high-quality patient care. However, it can be difficult to track trends and identify critical entry points for interventions when looking at raw data. Effective data analysis and visualization facilitates decision-making, and can improve reporting and communication with stakeholders.

INDICATOR BENCHMARKS

Benchmarks may be global standards established through research and global expert consensus, or references based on country trends monitored over time, which provide the optimum range or target for particular indicators. Comparison of indicator data to these optimum ranges allows programmes to effectively target resources, identify gaps in performance, and ultimately provide high quality services. The benchmarks provided in Table 3.9 have been established through research and global expert consultation, and can be used as reference by cervical cancer screening and treatment providers, subnational supervisors, and national level policy- and decision-makers to track performance and determine need for corrective action. Routine collection and monitoring of quality indicator data over time will allow for the development of targets and benchmarks at the national, subnational and facility levels which are specifically responsive to the country epidemiological context [see ACCP, 2004 for additional guiding information on target estimation].

TABLE 3.9
Benchmarks for key indicators

INDICATOR	BENCHMARK	TRIGGER POINTS FOR ACTION	POTENTIAL CAUSE OF OVER/UNDER BENCHMARK	ACTION TO BE CONDUCTED
• **Percentage of women screened for the first time who were within the target age range**	• Screen at least **70%** of women nationally within the target age group within 10 years of initiating the programme [WHO, 2013]	• Caution and continue to monitor: 51–69% • Immediate action needed: <50%.	• Incorrect age group targeted for screening. • Incorrect messaging or no messaging about target age group.	• Develop appropriate information, education and communication (IEC) materials for women in the target age group. • Train and incentivize community health workers (CHW) to identify and recruit women in the target age range for cervical cancer screening.
• **Percentage of screening target reached for the last month**	• At least **85%** of monthly screening target reached [WHO, 2013]	• Caution and continue to monitor: 75–84% • Immediate action needed: <75%	• Inadequate days during the week providing the service. • Inadequate number of providers providing the service. • Limited community mobilization.	• Increase number of days per week the service is provided. • Increase number of providers trained. • Increase community mobilization by working with women's health groups and CHWs.
• **Percentage of first time screened women aged 30–49 years with a positive screening test result**	• **VIA: 5–10%** in women aged 30–60 [WHO, 2013]; **5–25%** in general population;* could be higher in targeted screening to HIV positive women [ACCP, 2004] • **Cytology:** 1–5% HSIL [ACCP, 2004] • **HPV DNA Test**: 5–25% [ACCP, 2004]	• **VIA**: Caution and continue to monitor: 3–4% or 10–19% • Immediate action needed: <3% or >20%.**	• Age distribution, previous negative screening. • HIV prevalence • Poor provider skill/ confidence • High prevalence of cervical neoplasia. • Inadequate vinegar potency, Poor light source.	• Review provider's clinical diagnosing skills during supportive supervision using direct observation or by using images. Provide retraining. • Check the facility's equipment and supplies (vinegar strength, light source etc.) during facility-based survey.

Table 3.9 continued

INDICATOR	BENCHMARK	TRIGGER POINTS FOR ACTION	POTENTIAL CAUSE OF OVER/UNDER BENCHMARK	ACTION TO BE CONDUCTED
• ***All indicators measuring treatment***	• At least **90%** of **VIA-positive** lesions and invasive cancers receive treatment [WHO, 2013] • **90–100%** receiving treatment within 6 months of screening positive [ACCP, 2004]	• Caution and continue to monitor: 71–89% • Immediate action needed: <70%.	• Equipment malfunctioning; no gas. • Treatment provider not available. • Passive client re-call system. • Messaging around need for treatment is weak. • Challenges on client side (including: lack of funds; lack of permission; psychosocial, etc.)	• Supervisor or facility manager should check the facility's equipment and provider availability during supportive supervision and facility based surveys. • Set-up active follow-up of clients that postpone cryotherapy. • Strengthen messaging.
• **Percentage of first time screened VIA-positive women aged 30–49 years with lesions eligible for cryotherapy treated with cryotherapy during the same visit (Single Visit Approach)**	• **At least 80%** of women eligible for cryotherapy and found to be VIA+ should receive treatment the same day as screening [Anderson, 2015]	• Caution and continue to monitor: 61–79% • Immediate action needed: <60%	• Equipment malfunctioning; no gas. • Treatment provider not available. • Community messaging not informing women that they could be treated on the same day. • Male partners not informed in advance of screening, • Cost for treatment.	• Supervisor or facility manager should check the facility's equipment and provider availability during supportive supervision and facility based surveys. • Strengthen messaging to entire community. • Train community health workers to support women with treatment-related financial planning.

RESULTS AT-A-GLANCE POSTER

The Results-at-a-Glance Poster gives service providers a means to highlight time-trend data related to key actionable and easily calculated indicators using the facility register or monthly summary form.

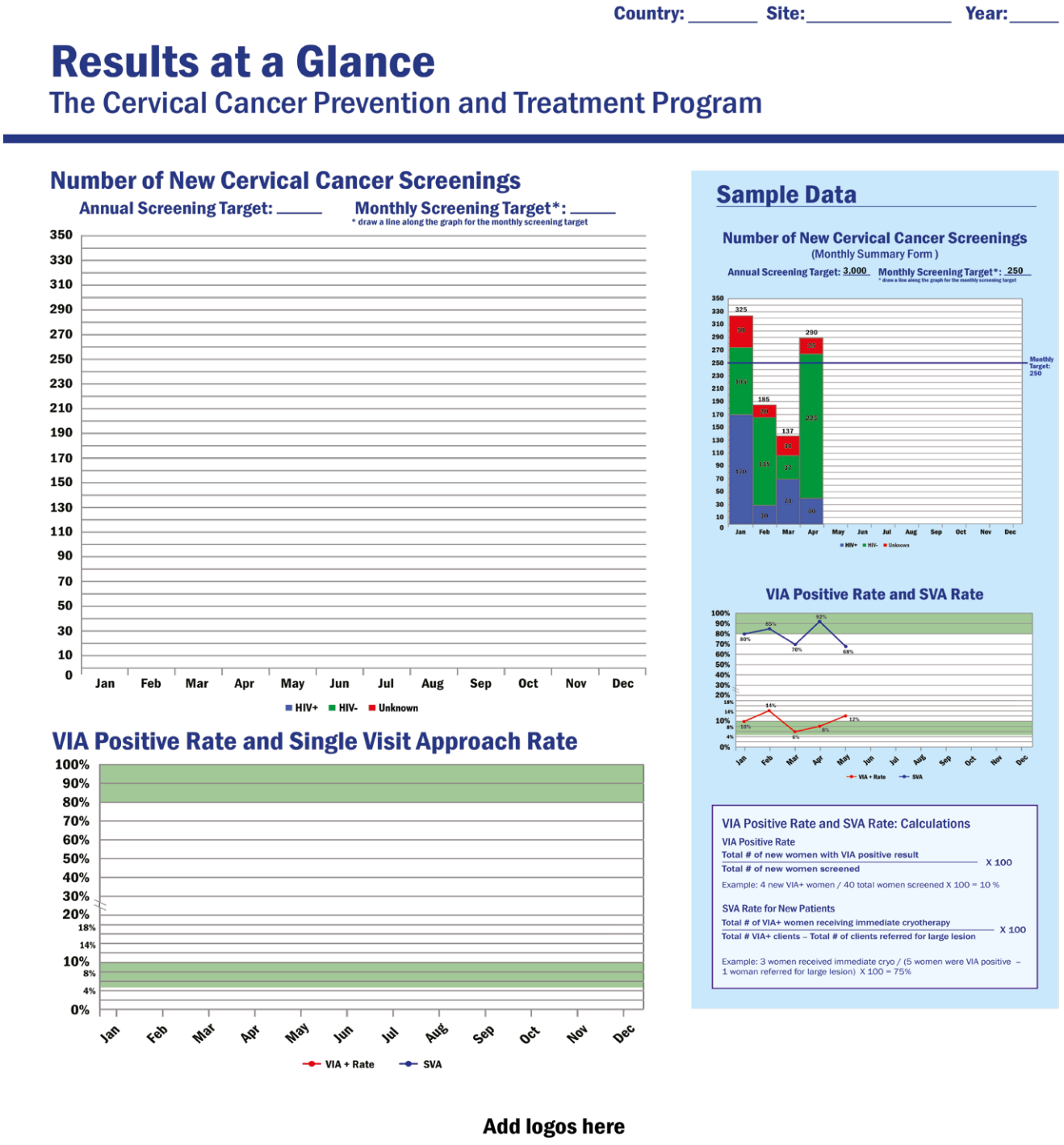
In reviewing data on a Results-at-a-Glance poster, facility staff can quickly assess performance and trends; for example, whether the number of screenings is going up or down in relation to the monthly target, or whether the relative proportion of screenings provided to HIV positive women each month is changing. A downward trend in the number of screenings may prompt an investigation into why women are not accessing screening. An upward trend in the number of screenings may indicate a need to add providers if client demand exceeds existing provider capacity.

The Results-at-a-Glance Poster should be printed out in poster format (45.72 cm x 57.15 cm) on heavy bond paper; ideally, printed in full colour with bleed, and laminated for use with a dry-erase marker. Grommets can be added to the four corners to make hanging or mounting easier. Staff add data points to the graph based on the monthly data.

The Results-at-a-Glance Poster in Figure 3.3 was developed for use with VIA-based screening programmes, but programmes using any or multiple screening methodologies could create similar posters by aligning with and using data collected on their Monthly Summary Form.

* This is an example based on a previously unscreened general population with standard risk factors; it may differ based on target population and other factors influencing prevalence.
** These percentages are based on the expectation that the general population will have a 5–10% test positivity rate, which may change depending on the population being screened.

FIGURE 3.3
Results-at-a-Glance poster – VIA-specific



ELECTRONIC HMIS: SUGGESTED DHIS 2 MODULE AND VISUALIZATION

To be used for decision-making, data must be collected and made available in an understandable, useful, and timely manner. To do this, many countries have implemented an electronic HMIS that facilitates aggregation, analysis, reporting, and visualization of data. One popular example of this type of a system is "DHIS 2" – an open-source, web-based database designed to facilitate health data interpretation and use. DHIS 2 provides tools that facilitate the entire health information process, from data entry to analysis and presentation of data in a form that is standardized, secure, and available on the internet.

The possible configuration of a module for cervical cancer prevention and control programmes described in the following can be customized and added to an active DHIS 2 instance, or can be used as a model for developing similar modules for other electronic HMIS. The electronic module is intended to pick up where a paper-based data collection system typically leaves off, starting with the input of data from monthly summary forms and moving through data analysis and visualization. The module is designed to be an extension of the HMIS that aids data flow and use from the facility to the national level. The data can be entered at the lowest level possible, and then it aggregates up to the highest level automatically. In this way, all of the data are stored in one place, which allows for the greatest transparency and speed of analysis.

Intended users are the HMIS developers at the MOH who are responsible for ensuring that the HMIS collects all relevant data for MOH programmes.

DESCRIPTION OF THE MODULE

This module is structured around a hierarchy that mimics that of the health system, vis-à-vis the respective arrangement of levels from the health facilities to subnational divisions. The entire module can be customized for the needs of a given location, while maintaining those elements that are required for the proper functioning of the overall system. The examples provided are from a module for a VIA-based screening programme, but can be used to inform a programme using any type of screening methodology.

DATA ENTRY

The module includes a set of data entry screens that facilitate collection of data, as seen in Figure 3.4 of note is that the illustration shows only a fraction of the entire data entry form.

If a paper-based monthly summary form is in use, the DHIS 2 data entry page should mirror the paper-based form in order to facilitate ease of use and consistency in the data that are captured. As with the indicators, countries should ensure the module is adapted to their needs and reflects the screening methodologies that are in use in the country.

FIGURE 3. 4
Sample DHIS 2 data entry screen

Data Entry

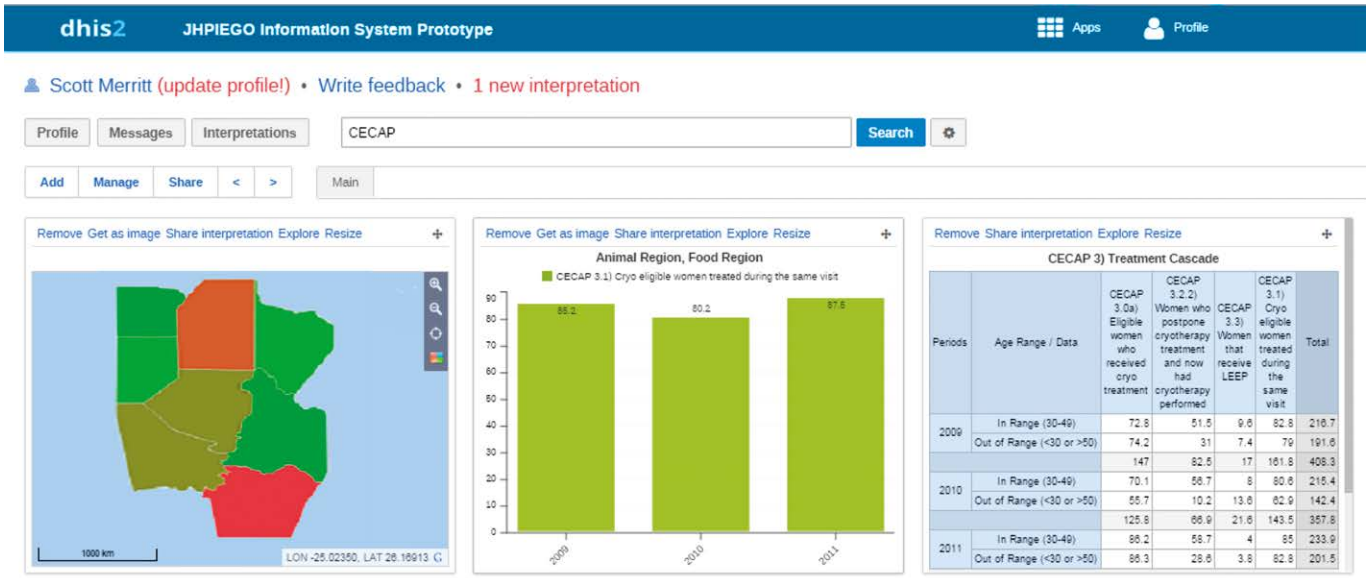
Organisation Unit: Cookie Site
Data Set: CECAP - Monthly Summary
Period: October 2011 | Prev year | Next year

No.	Indicator	Visit	HIV+		HIV-/ Unknown		Total
			In Age Range (30< and <49)	Out of Range (<30 or >49)	In Age Range (30< and <49)	Out of Range (<30 or >49)	
1	Number of clients who received a SCREENING * Exclude VIA triage	New / First Screening	14	2	37	4	57
		1 Year Follow-Up Post Treatment	1		3		4
		Routine Visit (previous negative result)				1	1
2	Number of clients with POSITIVE screening result *Include suspect cancer cases	New / First Screening	2		1		3
		1 Year Follow-Up Post Treatment					0

DASHBOARDS

Once data are entered into the electronic module, DHIS can output them in the form of dashboards, tables, maps, and graphs to facilitate visualization of trends and identification of patterns. Various tables and graphs can be used at the facility and subnational level to identify gaps in performance or worrying trends, or at the national level for oversight and reporting purposes. Figure 3.5 illustrates how the DHIS 2 module facilitates data visualization in the form of maps, graphs, and tables.

FIGURE 3.5
DHIS 2 dashboard



DATA TABLES

Table 3.10 illustrates the quarterly data for key indicators of one facility with stoplight colour-coding related to indicator benchmarks in a dashboard format. Red indicates action needed, yellow indicates more information needed or "watch," and green indicates that the benchmark has been met and no action is necessary. Dashboards can be customized to populate tables with subnational or national data, with designated access for different levels according to need.

TABLE 3.10
Key indicator quarterly dashboard for VIA, by HIV status, month and totals

INDICATOR	HIV STATUS	APRIL	MAY	JUNE	TOTAL
Number of new clients screened with VIA Monthly Total Target: 220 Quarterly Total Target: 700 Green: 75%-125% of Target; Yellow: 26%-74% of Target; Red: <25% or >125% of Target	HIV+	16	82	53	**151**
	HIV-	140	104	96	**340**
	Unknown	45	42	33	**120**
	TOTAL	**201**	**228**	**182**	**611**
Number of new clients screened with a VIA + result	HIV+	2	21	14	**37**
	HIV-	15	12	12	**39**
	Unknown	2	4	3	**9**
	TOTAL	**19**	**37**	**29**	**85**
Number of VIA+ clients treated with cryotherapy on the same day as screening	HIV+	1	11	11	**23**
	HIV-	10	5	9	**24**
	Unknown	0	3	3	**6**
	TOTAL	**11**	**19**	**23**	**53**
Total Number of clients referred for large lesions	HIV+	1	2	2	**5**
	HIV-	2	0	0	**2**
	Unknown	1	0	0	**1**
	TOTAL	**4**	**2**	**2**	**8**

Table 3.10 continued

INDICATOR	HIV STATUS	APRIL	MAY	JUNE	TOTAL
VIA Positive Rate *Numerator: # of new VIA+ clients* *Denominator: # of new clients screened* Benchmark: 5–25% HIV • Yellow: 3–4% or 10–19% • Red: below 3% or above 19%	HIV+	13%	25%	26%	**25%**
	HIV-	11%	12%	13%	**12%**
	Unknown	4%	10%	9%	**8%**
	TOTAL	**9%**	**16%**	**16%**	**14%**
Single Visit Approach Rate *Numerator: # of VIA+ screened clients treated on the same day as screening* *Denominator: # VIA+ clients (-) # referred for large lesions* Benchmark: at least 80% • Yellow: 61–79% • Red: 60% or below	HIV+	100%	58%	92%	**72%**
	HIV-	77%	42%	75%	**65%**
	Unknown	0%	75%	100%	**75%**
	TOTAL	**73%**	**54%**	**85%**	**69%**
Large Lesion Referral Rate *Numerator: # of VIA+ clients with large lesions* *Denominator: # VIA+ clients*	HIV+	50%	10%	14%	**14%**
	HIV-	13%	0%	0%	**5%**
	Unknown	50%	0%	0%	**11%**
	TOTAL	**21%**	**5%**	**7%**	**9%**

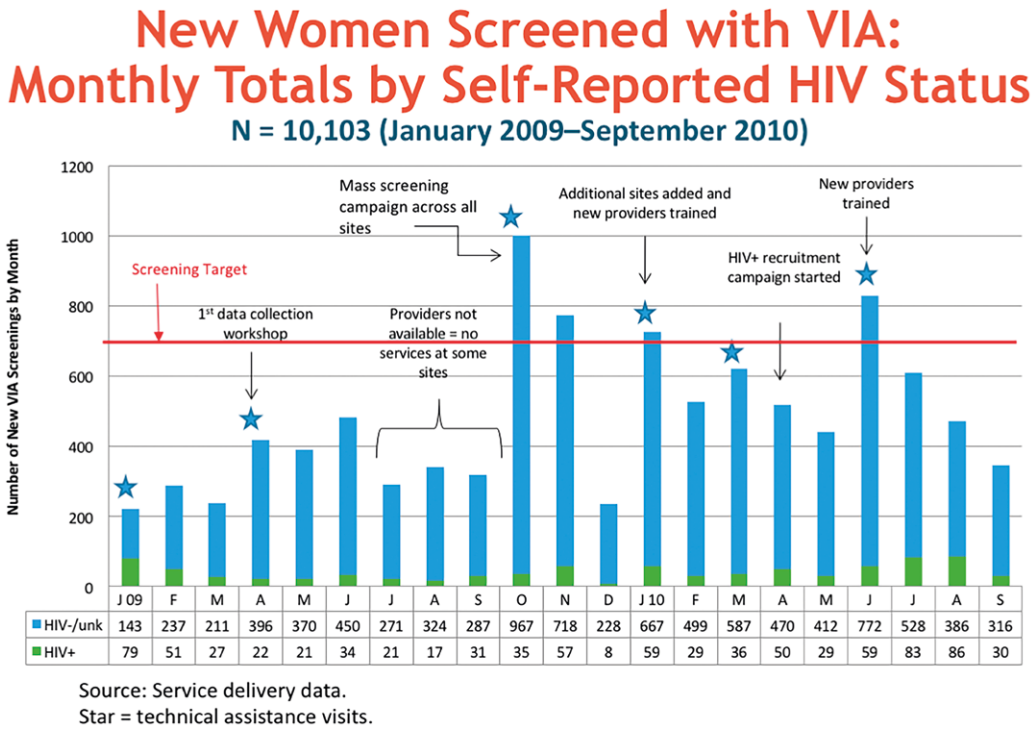
DATA GRAPHS

Data produced by the DHIS 2 module can be exported into a spreadsheet programme, such as Excel, to create complex graphic representations of trends, patterns, successes and challenges to facilitate discussion and decision-making. Graphs can be developed for any indicator of interest as long as accurate and complete data are housed within an HMIS.

Figure 3.6 is a subnational level graph of new women screened with VIA over a 21-month period disaggregated by HIV status, including key events that took place in the sub district during the time period. The graph indicates the screening target in order to make it easier to identify how activities implemented by the programme (e.g. mass screening campaigns, additional providers trained) impacted the number of women screened.

FIGURE 3.6

Sample graph for visualization of data from HMIS, transferred to Excel and presented in Power Point



Source: Service delivery data.
Star = technical assistance visits.

DATA QUALITY

Data should be accurate, reliable, precise, timely, and complete; they should be easy to collect and free of bias. Ensuring data quality involves the following: 1) standardized and ethical data collection, maintenance, and analysis procedures; 2) training on data collection, maintenance, and analysis; and 3) data quality reviews. Routine data quality assurance measures should be instituted at each health facility as well as at each point of aggregation (facility, subnational, and national levels). Comparison of past-year or previous quarterly results by facility, and progress towards targets and benchmarks, will identify any inconsistencies that could be indicative of a data quality problem, data entry error, or gaps in knowledge, skills, or other programme components.

DATA QUALITY STRENGTHENING

Establishing systems for standardized data collection is critical to ensuring good data quality; however, users of such systems must also be comfortable and competent in their use. One of the best ways to ensure user comfort and quality is to involve users in the design phase, with initial and ongoing training to ensure data quality. Managing M&E and strategic information requires that sufficient staff at all levels be trained in high quality, ethical data collection, data management, and analysis methods. The primary data collectors within cervical cancer screening and treatment programmes are the screening and treatment providers themselves. When providers clearly see that the data they collect during client visits and feed into the system informs and improves their work in meaningful ways, they will be more invested in collecting high quality data. Provider investment in data quality will lead ultimately to more complete and accurate results at all levels of the M&E system.

In some countries, it may be possible to integrate training on how to collect, analyse, interpret, and use high quality data into the initial provider training on screening and treatment; this is ideal, and strongly recommended. Other countries may choose to have providers return for a second mini-training, following their initial provider training, to focus on data quality strengthening. Key areas of focus for training can be found in the Indicators section.

DATA QUALITY ASSURANCE

Routine data quality assurance measures should be instituted at each health facility as well as at each point of aggregation (facility, subnational, and national). Data quality review and data strengthening are an integral part of supportive supervision, and should be incorporated into supportive supervision visits for cervical cancer services and activities at all levels. Supervisors should use these visits as an opportunity to review facility-level data results and quality with staff, and make corrections and mentor facility staff in data collection as necessary. Specific attention should be paid to those items for which action plans were developed during the previous visit and to common documentation errors found in the facility's monthly data reporting. For further guiding information on conducting supportive supervision see Section 4, Facility-based Surveys.

In addition to conducting data review as part of supportive supervision on no less than a quarterly basis, MoH M&E district staff should conduct more comprehensive data quality audits on an annual or biannual basis to assess the quality of facility-level data. Data quality should be assessed using a comprehensive data quality assessment (DQA) or an external quality assessment (EQA) tool. Existing comprehensive DQA tools, including PRISM, can be applied to assess the quality, completeness, timeliness, and accuracy of the data being reported through the cervical cancer screening and treatment programme.

The data quality review (DQR) framework, described by WHO, the Global Fund to fight AIDS, Tuberculosis and Malaria, and Gavi Vaccine Alliance, provides a framework for assessing data quality across a variety of health sector approaches. The framework refers to dimensions of quality: validity, accuracy, availability, completeness, and timeliness. The DQR approach, which recommends both routine and annual assessments of data, recommends desk review of data and system assessment methods.[1]

[1] Further information on the DQR Framework and Approach can be found in the WHO publication, *Consolidated Strategic Information Guidelines for HIV in the Health Sector*, 2015. Available at: http://apps.who.int/iris/bitstream/10665/164716/1/9789241508759_eng.pdf.

DATA PROTECTION

Patient and programme monitoring require the collection, entry, storage, and sharing of medical data, some of which can be highly personal and sensitive. Assigning and ensuring responsibility for data maintenance is one of the most important ethical considerations when conducting patient and programme monitoring. In order to guarantee client confidentiality, data management must be conducted in an ethical and client-centred manner.

Each country has its own standards, procedures and laws related to the protection of medical data and these should be consulted when developing data management and storage protocols. However, as shown in Table 3.11, fundamentally, data protection principles are standard across contexts.

TABLE 3.11
Data protection principles

DATA PROTECTION PRINCIPLE	EXPLANATION
Propriety	• Data should be collected and processed in a just manner and in accordance with the law. • All data collection and management should be conducted with the patient's interest in mind and in accordance with the country's medical-information protection laws and standards.
Utility	• Data collected should be "adequate, relevant and not excessive." • As discussed in the earlier subsection, Prioritizing Indicators: Core vs. Optional, information systems can only collect a finite amount of information in a consistent and usable manner. Limiting data collected to only the information needed not only helps ensure data quality, but also protects patients from the burden associated with unnecessary data collection.
Accuracy	• All personnel working with data should do their part to ensure accuracy, and prevent the falsification, manipulation or alteration of data to misrepresent results.
Privacy	• Data should be kept secure. • As included in the **Data Management** standard of the **Facility-Based Surveys** section, data management and storage should ensure the privacy of client information at the facility level and throughout the M&E system. Medical data collected at the facility are clearly identifiable and will typically include client name and contact information. As data flow "upwards" through the health information system (i.e. from the facility to the global level) data should become decreasingly identifiable.
Transparency	• Processes and results should be shared with appropriate parties to whom the information is applicable.
Timeliness	• M&E data, and results of analysis, should be shared in a timely manner.
Use Limitation	• Data should not be kept longer than is necessary. • Countries will have their own processes for determining when certain data are no longer useful or relevant and should be destroyed.
Accountability	• For those with access to data, the type and content of data they can access must be clearly defined. Professional ethical responsibilities should be clearly communicated and upheld.
Impartiality	• All data collection principles should be applied consistently at all levels of data collection, entry, analysis and dissemination.

ETHICAL CONSIDERATIONS FOR PROGRAMME INTEGRATION

In most cervical cancer programmes, particularly those integrated with HIV programming, HIV status will be documented on data collection forms, and linked to an individual's cervical cancer data at the facility level (and possibly above) health information system. Some countries may have specific ethical protections for people living with HIV/AIDS which need to be taken into consideration when developing ethical data collection and management processes for integrated programmes.

ETHICAL CONSIDERATIONS FOR CHILDREN AND ADOLESCENTS LIVING WITH HIV/AIDS

Because cervical cancer screening is recommended for all sexually active women living with HIV/AIDS, regardless of age, screening and treatment data on underage girls may be routinely collected in countries with high HIV prevalence. Ethical protections for minors are often more complex and robust than those for adults. Countries targeting HIV-positive women for cervical cancer screening should consult their national ethical standards related to the protection of medical data collected from minors.

ETHICAL CONSIDERATIONS FOR ELECTRONIC SYSTEMS

Electronic information systems have unique privacy and confidentiality vulnerabilities. Countries using electronic records will have administrative, physical and technical safeguards in place to protect against cyber threats. Cervical cancer data collection and management tools and processes must be compatible with the electronic security systems in place.

IMPLEMENTATION TOOLS AND MATERIALS

REFERENCE SHEETS FOR WHO GLOBAL INDICATORS FOR CERVICAL CANCER PREVENTION AND CONTROL

INDICATOR 1	SCREENING RATE
What it measures	Percentage of women aged 30–49 years who have been screened for the first-time with a cervical screening test in a 12-month period targeting women in this age range
Numerator (NUM)	Number of women aged 30–49 years who have been screened for the first time in a 12-month period
Denominator (DEN)	Number of women aged 30–49 years in the population
Data Source	**NUM**: HMIS **DEN**: population census
Frequency	Annual – Calculating this information annually will allow for measurement of a cumulative screening incidence over time.
Comments	**Note on Limitations** Population census data may not be available for the reporting period. Programmes may choose to use weighted screening prevalence data collected as part of a population based survey to estimate screening coverage within the population. Without an electronic registry, determining whether a screening is *first time* will depend on client self-report, which can introduce misclassification bias for which the data may need to be adjusted. **Notes on Disaggregation** **Age**: Some programmes have broader national target age ranges, particularly those in countries with high rates of HIV. This indicator can be adapted at the national level to reflect the national target age range. The modified indicator can be disaggregated by age in order to report globally using the WHO indicator. **First time screened**: Some programmes may be interested in measuring all screenings – in addition to first time screenings – at a national, subnational or facility level. This indicator can be adapted accordingly and disaggregated by first-time, versus all, screenings. **Time frame**: Programmes will need to monitor screening rate more frequently at the national, subnational or facility level. National level indicators can adapt to reflect the programme's time-frame reporting needs. The modified indicator can be disaggregated by time-frame in order to report globally using the WHO indicator. **HIV Status**: Because HIV-positive women are at a higher risk for cervical cancer, programmes in countries with high rates of HIV should collect data on HIV status from all women screened. This indicator can be disaggregated by HIV status at the national, subnational and facility levels based on programme need. **Result**: The Screening Rate can be disaggregated by result in order to determine Screening Test Positive Rate.
Example for VIA-specific Programme	Percentage of women aged 30–49 years who have been screened for the first-time with VIA in a 12-month period targeting women in this age range *[Screening Rate, WHO 2013]* **NUM**: Number of women aged 30–49 years who have been screened for the first time in a 12-month period **DEN**: Number of women aged 30–49 years in the population

INDICATOR 2	SCREENING TEST POSITIVITY RATE
What it measures	Percentage of screened screen-positive women aged 30–49 years with a positive result in a 12-month period
Numerator (NUM)	Number of women aged 30–49 years reported positive in a 12-month period
Denominator (DEN)	Total number of women aged 30–49 years screened in a 12-month period
Data Source	**NUM**: HMIS **DEN**: HMIS
Frequency	Annual
Comments	**Note on Definitions:** *Positive result* includes suspect cancer and invasive cancer. **Notes on Disaggregation:** **First-time Screen Positivity Rate benchmark**: The range of VIA test positivity is 5–10% for women aged 30–60 years [WHO, 2013]; however test positivity rate will vary depending the age distribution of screened women, HIV prevalence in the area, practitioner experience, and screening method and algorithm. In order to understand how country-level screening test positivity rate compares to the expected test positivity rate and to determine what corrective action may be needed, countries should consider adapting the indicator based on country-level epidemiology, disaggregating by age, HIV status and screening method as needed. **Age**: Some programmes have broader national target age ranges, particularly those in countries with high rates of HIV. These indicators can be adapted at the national level to reflect the national target age range. The modified indicator can be disaggregated by age in order to report globally using the WHO indicator. **Time frame**: Programmes will need to monitor screening test positivity rate more frequently at the national, subnational or facility level. National level indicators can adapt the indicator to reflect the programme's time-frame reporting needs, and disaggregate by time-frame in order to report globally on the WHO indicator. **HIV Status**: Because HIV-positive women are at a higher risk for cervical cancer, programmes in countries with high rates of HIV should collect data on HIV status from all women screened. This indicator can be disaggregated by HIV status at the national, subnational and facility levels based on programme need.
Example for VIA-specific Programme	Percentage of VIA-screened women aged 30–49 years with a positive result *[VIA Test Positivity Indicator, WHO 2013]* **NUM**: Number of women aged 30–49 years who reported positive on a VIA screening in a 12-month period **DEN**: Total number of women aged 30–49 years who were VIA screened in a 12-month period

INDICATOR 3	TREATMENT RATE
What it measures	Percentage of screen-positive women who have a received treatment in a given year *(Benchmark: at least 90%)*
Numerator (NUM)	Number of screen-positive women aged 30–49 years completing appropriate treatment in a 12-month period
Denominator (DEN)	Number of screen-positive women aged 30–49 years in a 12-month period.
Data Source	**NUM**: Screening programme data (HIS) and cancer registry treatment information **DEN**: Screening programme data (HIS)
Frequency	Annually
Comments	**Note on Definitions** *Treatment* includes cryotherapy (including Single Visit Approach and cryotherapy received after postponement), LEEP, cold knife conisation for precancerous lesions, and surgery, chemotherapy and radiotherapy for invasive cancer. **Notes on Methodology** Countries should ensure that the numerator and denominator mirror one another. This can be achieved by including target age range in both the numerator and the denominator. Where multiple screening methods or strategies exist, attention must be paid to ensure that the treatment rate is accurately monitoring whether the women who needed treatment received treatment. For example, when there is a mixture of screen-and-treat with VIA alone, and screen-triage-treat with HPV Testing and VIA, all women positive at VIA screening need treatment BUT not all women who screen positive with an HPV Test need treatment – only those who also tested positive on the VIA triage examination need treatment; therefore the denominator should count all positives on VIA screening and all positives on VIA triage and NOT all positives screened with HPV Test. **Notes on Disaggregation:** **Age**: Some programmes have broader national target age ranges, particularly those in countries with high rates of HIV. This indicator can be adapted at the national level to reflect the national target age range. The modified indicator can be disaggregated by age in order to report globally using the WHO indicator. **Time frame**: Programmes will need to monitor treatment rate more frequently at the national, subnational or facility level. National level indicators can adapt this indicator to reflect the programme's time-frame reporting needs, and disaggregate by time-frame in order to report globally on the WHO indicator. **Treatment type**: Programmes offering multiple treatment options, may want the ability to report on individual treatment types at the national, subnational or facility level. Programmes can adapt the indicator to include the treatment type of interest, or disaggregate on treatment type.
Example for VIA-specific Programme	Percentage of VIA-positive women aged 30–49 years who have received treatment in the previous 12-month period *[Treatment Rate Performance Indicator, WHO, 2013]* **NUM**: Number of VIA-positive women aged 30–49 years completing appropriate treatment in a 12-month period **DEN**: Number of VIA-positive women aged 30–49 years in a 12-month period

REFERENCE TABLES FOR GLOBAL, CORE, AND OPTIONAL INDICATORS FOR CERVICAL CANCER PREVENTION AND CONTROL

GLOBAL INDICATORS

The Global indicators are the three globally standardized performance indicators recommended by WHO as fundamental to monitoring a cervical cancer prevention programme: 1) Screening Rate; 2) Screening Test Positivity Rate; and 3) Treatment Rate. In order to ensure the ability to monitor trends across countries, these indicators should be used as set out by WHO and should not be adapted or changed. Where programme priorities can be addressed by these indicators as written (see previous guiding information on Indicator Disaggregation), they may be considered the Core national indicators for Screening Rate, Screening Test Positivity Rate, and Treatment Rate.

TABLE 3.12

Global indicators: screening and treatment – all screening strategies and methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
G1.0 SCREENING RATE	**ALL SCREENING METHODS:** Percentage of women aged 30–49 years who have been **screened for the first time with a cervical cancer screening test** in a 12-month period targeting women aged 30–49 years. *[Screening Rate Indicator, WHO, 2014]*	**NUMERATOR**: Number of women aged 30–49 years who have been screened for the first time with a cervical screening test in a 12-month period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility). **DENOMINATOR**: Number of women aged 30–49 years in the population. **DATA SOURCE**: Population census. **FREQUENCY**: Annually. **DISAGGREGATION**: HIV Status, Screening Method *(if more than one in use)*. **CONSIDERATIONS**: • May be used without adaptation at national, subnational, or facility levels, where national target age range is 30–49 years • Recommended to be calculated over a 12-month period or more frequently depending on quality assurance (QA)/quality improvement (QI) needs. Measuring screening rates annually will permit measurement of a cumulative incidence of women screened.
	VIA: Percentage of women aged 30–49 years who have been **screened for the first time with VIA** in a 12-month period. *[Screening Rate Performance Indicator, WHO, 2013]*	**NUMERATOR**: Number of women aged 30–49 who have been screened for the first time with VIA in a 12-month period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Number of women aged 30–49 years in the population. **DATA SOURCE**: *Facility level*: Facility catchment area; *Subnational and National level*: Population census **FREQUENCY**: Annually. **DISAGGREGATION**: HIV Status. **CONSIDERATIONS**: • May be used without adaptation at national, subnational, and facility levels, where national target age range is 30–49 years • Recommended to be calculated over a 12-month period or more frequently depending on QA/QI needs. Measuring screening rates annually will permit measurement of a cumulative incidence of women screened.
G2.0 SCREENING TEST POSITIVITY RATE	**ALL SCREENING METHODS:** Percentage of **screened** women aged 30–49 years with a positive result in a 12-month period *[Cervical Cancer Screening Test Positivity Rate Indicator, WHO, 2014]*	**NUMERATOR**: Number of women aged 30–49 years reported positive in a 12-month period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility). **DENOMINATOR**: Total number of women aged 30–49 years screened in a 12-month period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility). **FREQUENCY**: Annually. **DISAGGREGATION**: HIV Status, Screening Method, Screening Visit Type. **CONSIDERATIONS**: • Recommended to be calculated over a 12-month period or more frequently depending on QA/QI needs.

Table 3.12 continued

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
	VIA: Percentage of screened women aged 30–49 years with a **positive VIA test result in the previous 12-month period.** *[VIA Positivity Rate Performance Indicator, WHO, 2013]*	**NUMERATOR**: Number of women aged 30–49 reported positive in a 12-month period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility). **DENOMINATOR**: Total number of women aged 30–49 years screened in a 12-month period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility). **FREQUENCY**: Annually. **DISAGGREGATION**: HIV Status, Screening Visit Type. **BENCHMARK**: 5–25% in previously unscreened population (see Table 3.9). **CONSIDERATIONS**: • Recommended to be calculated over a 12-month period or more frequently depending on QA/QI needs.
G3.0 TREATMENT RATE	**ALL SCREENING METHODS** Percentage of screen-positive women who have **received treatment** in a given year *[Treatment Rate Indicator, WHO, 2014].*	**NUMERATOR**: Number of screen-positive women aged 30–49 years completing appropriate treatment in a 12-month period. **DATA SOURCES**: Cancer registry (invasive cancer treatment) + cervical cancer service delivery data (screening and precancerous lesion treatment) **DENOMINATOR**: Number of screen-positive women in a 12-month period. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Method, Treatment Type, Screening Visit Type **BENCHMARK**: At least 90% eligible for treatment receiving treatment (see Table 3.9) **CONSIDERATIONS** • This indicator is intended to monitor whether all those requiring treatment received treatment. For strategies where the decision of whether or not to treat is dependent on the results of a triage test, this indicator must be adjusted to capture those who are both screen-positive and triage-positive (i.e. those who required treatment). Where a combination of screen-treat and screen-triage-treat strategies are in use, the indicator wording can be adapted as needed, but must still measure: - Numerator: the number of women who required treatment and received treatment - Denominator: the number of women who required treatment • Treatment options include: cryotherapy (single-visit approach [SVA], previously postponed, and referred-in), LEEP, cold knife conisation, and surgery for precancerous lesions; and surgery, chemotherapy, and radiotherapy for invasive cancer.
	VIA: Percentage of **VIA-positive women who have received treatment** in a given year *[Treatment Rate Performance Indicator, WHO, 2013*	**NUMERATOR**: Number of VIA-positive women aged 30–49 years completing appropriate treatment in a 12-month period. **DATA SOURCES**: Cancer Registry (invasive cancer treatment) + cervical cancer service delivery data (screening and precancerous lesion treatment) **DENOMINATOR**: Number of VIA-positive women in a 12-month period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV status, Treatment Type, Screening Visit Type **BENCHMARK**: At least 90% of VIA-positive lesions and invasive cancers receive treatment (see Table 3.9) **CONSIDERATIONS** • Treatment options include: cryotherapy (SVA, previously postponed, and referred-in), LEEP, cold knife conisation, and surgery for precancerous lesions; and surgery, chemotherapy, and radiotherapy for invasive cancer.

CORE INDICATORS

The Core indicators are a small set of basic indicators which are considered the bare minimum, and fundamental to all programmes. The suggested Core indicators align with the Global indicators, while allowing flexibility to adapt the indicators to fit programme context. This limited set of indicators represents the minimum typically monitored at the National level.

TABLE 3.13
Core indicators: screening and treatment – all screening strategies and methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
C0.0 NUMBER SCREENED	Number of women screened in a given time period	**DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Method, Screening Visit Type **CONSIDERATIONS** • This basic number is vital for understanding and estimating the demand for screening services, and forecasting and planning for the resources required to meet that demand and the resulting treatment needs. Disaggregation enhances sensitivity of this indicator in order to help identify the need for further outreach, as well as trigger further situational investigation at lower levels of the health system. • Because this total and its disaggregated subtotals are used as components for calculation of a number of screening and treatment indicators, this indicator does not need to be monitored directly or separately in programmes which have data systems with the capacity to retrieve these totals as needed for forecasting; therefore this indicator should be considered most useful for countries with nascent systems with limited capacity, without current capacity to fully disaggregate relevant aggregate indicators.
C1.0 SCREENING RATE	Percentage of women **within the national programme target age range** who have been screened for the first time in a given time period	**NUMERATOR**: Number of women *within the national programme target age range* who have been screened for the first time in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Total number of women *within the national programme target age range* in the population in a given time period. **DATA SOURCES**: *Facility level monitoring*: Facility catchment area; *Subnational and National level monitoring*: Population census **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: HIV Status, Screening Method **CONSIDERATIONS** • Indicator should be adapted to the national programme target age range • Recommended to be calculated over a 12-month period or more frequently depending on QA/QI needs. Measuring screening rates annually will permit measurement of a cumulative incidence of women screened.
C2.0 SCREENING TEST POSITIVITY RATE	Percentage of [first time] screened women [within the national programme target age range] who received a **positive screening result** in a given time period	**NUMERATOR**: Number of [first time] screened women [within the national programme target age range] who received a positive screening result in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Number of [first time] screened women [within the national programme target age range] in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group/Range*, HIV Status, Screening Method, Screening Visit Type* *See "Considerations" below, and Indicator Disaggregation guiding information **CONSIDERATIONS** • Calculating this indicator (and other indicators in this cascade) including the language in brackets allows programmes to monitor test quality by measuring the test positivity rate for the screening naïve within the target population; however, monitoring patient care and clinical management is better supported by excluding the language within brackets in order to capture all test positives regardless of age or screening history. Where systems have capacity for high-quality data aggregation, the indicator may be broadened and disaggregated by Age Group or Range and Screening Visit Type to allow for granularity.

Table 3.13 continued

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
C2.4 SUSPECTED CANCER	Percentage of [first time] screened women [within the national programme target age range] with suspected cervical cancer	**NUMERATOR**: Number of [first time] screened women [within the national programme target age range] with suspected cervical cancer in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening, triage, or referral facility, depending on strategy) **DENOMINATOR**: Number of [first time] screened women [within the national programme target age range] in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually (National level), Quarterly, Monthly **DISAGGREGATION**: Age Group or Range*, HIV Status, Screening Visit Type* *See "Considerations" below, and Indicator Disaggregation guiding information **CONSIDERATIONS** • Calculating this indicator as written allows programmes to monitor suspected cancer in screening naïve women within the target population; however, monitoring patient care and clinical management is better supported by excluding the language within brackets and capturing all suspected cancer cases regardless of age or screening history. The broader indicator should then be disaggregated by Age Group or Range and Screening Visit Type to allow for granularity and comparison of rates of suspected cancer cases in the different populations. • Data collection for this indicator should be implemented based on the screening strategy employed – for example, cases of suspected cancer may be identified at the screening step for VIA-based strategies, but for HPV test-based strategies, cases may be identified at the triage step or at VAT.
C3.0 TREATMENT RATE	Percentage of screen-positive women who have **received treatment** in a given time period	**NUMERATOR**: Number of screen-positive women who have **received treatment** in a given time period. **DATA SOURCES**: Cancer Registry/Hospital (invasive cancer treatment) + cervical cancer service delivery data (screening and precancerous lesion treatment) **DENOMINATOR**: Number of screen-positive women in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV status, Screening (or Triage) Method, Treatment Type, Screening Visit Type **BENCHMARK**: At least 90% eligible for treatment receiving treatment (see Table 3.9) **CONSIDERATIONS** • This indicator is intended to monitor whether all those who required treatment received treatment – it is vital that all women who require treatment are provided with treatment. For strategies where the **decision to treat is determined by triage** examination, only women who tested positive on **both** the primary screening test and the triage examination will require treatment, and should be counted in the numerator – programmes may adjust the wording of these indicators to better suit the context (e.g. replace *screen-positive* with *triage-positive*). In countries where both screen-treat and screen-triage-treat strategies are in use, the indicator wording can be adapted to better suit the context, but must still measure: - Numerator: the number of women who required treatment and received treatment - Denominator: the number of women who required treatment • Treatment options include: cryotherapy, LEEP, cold knife conisation, and surgery for precancerous lesions; and surgery, chemotherapy, and radiotherapy for invasive cancer.

TABLE 3.14
Core indicators: programme – all screening strategies and methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
C4.0 PROPORTION OF FACILITIES PROVIDING SERVICES	Proportion of **health facilities** that are providing the cervical cancer services they are designated to provide	**NUMERATOR**: Total number of health facilities that are providing cervical cancer services. **DATA SOURCES**: Facility-based Surveys (Service Availability and Facility-readiness tools, Health Facility Census, etc.); HMIS; Facility Registry (if current) **DENOMINATOR**: Total number of health facilities that are designated to provide cervical cancer services. **DATA SOURCES**: Facility-based Surveys (e.g. Supportive supervision/facility-readiness survey in this toolkit; Health Facility Census, etc.); HMIS; Facility Registry (if current) **FREQUENCY**: Every 5 years *(and as baseline/monitoring when scaling-up services)* **DISAGGREGATION**: Facility Level, Public or Private Facility, Screening and Treatment Services, Service Provision Schedule (e.g. Full-time, Part-time; or 1–3 days per week, 3+ days per week; etc.) **CONSIDERATIONS**: • May be adapted to monitor facility compliance with national reporting policy by increasing frequency (based on reporting schedule) and adjusting numerator and denominator. • This indicator, when calculated as written, monitors facility readiness to provide services. As seen in Facility-based Surveys section of this toolkit, when the denominator is changed to *the total number of health facilities in the country*, the indicator has been adapted to monitor cervical cancer service availability.

In addition to the Core indicators above, the following indicators should be considered Core for screening strategies which include a triage step between screening and treatment of precancerous lesions (e.g. HPV Testing followed by VIA; cytology or HPV Testing followed by colposcopy). In strategies where the results of a primary screening test, secondary screening test (sequentially or concurrently), and triage test determine the need for precancerous lesion treatment, these indicators may be used as models to create two additional Core indicators in order to monitor the *secondary screening test* or *complementary screening test*.

TABLE 3.15

Core indicators: screening and treatment – screen, triage and treat; all methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
C2.1 RECEIVED TRIAGE EXAMINATION (CORE)	Percentage of screen-positive women who received a triage examination	**NUMERATOR**: Number of screen-positive women who received a triage examination. **DATA SOURCE**: Cervical cancer service delivery data (triage facility) **DENOMINATOR**: Number of screen-positive women. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range*, HIV Status, Triage Method, Screening Visit Type* *See "Considerations" under C2.0, and Indicator Disaggregation guiding information **CONSIDERATIONS** • This indicator is applicable to screening strategies that include a triage (or secondary screening) step between the primary screening test and precancerous lesion treatment or further evaluation and diagnosis. • This indicator measures whether all those who needed a triage examination (i.e. all screen-positives) received a triage examination. For indicators monitoring the triage referral process, see the additional Optional indicators in the triage cascade (OPT2.2.1–2.2.2).
C2.2 TRIAGE EXAMINATION POSITIVITY RATE (CORE)	Percentage of screen-positive women with a **positive triage examination result** in a given time period	**NUMERATOR**: Number of screen-positive women with a **positive triage examination result** in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (triage facility) **DENOMINATOR**: Number of screen-positive women who received a triage examination in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (triage facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range*, HIV Status, Triage Method, Screening Visit Type* *See "Considerations" under C2.0, and Indicator Disaggregation guiding information **CONSIDERATIONS** • This indicator is applicable to screening strategies that include a triage (or secondary screening) step between the primary screening test and precancerous lesion treatment or further evaluation and diagnosis. • This indicator monitors test quality by measuring the positivity rate of the triage test. Slight adaptation of the numerator or denominator allows calculation of additional statistics that can assist in the monitoring of trends and the prospective estimation of material and financial resources (see OPT2.3)

OPTIONAL INDICATORS

The majority of Optional indicators are most useful when monitored only at the facility and/or subnational levels. Indicators related to invasive cervical cancer may be monitored at national level, in addition to tertiary or secondary care facilities and subnational level. Optional indicators can be incorporated into the M&E system based on programme maturity, data system functionality, and available resources. Programmes may also choose Optional indicators based on the need to monitor specific priorities – such as integration with HIV services.

Many of the suggested Optional indicators monitor process at a granular level, and therefore the benefit of collecting and analysing the additional data should be carefully weighed against the costs and the capacity to collect and manage quality data. For example, a programme lacking access to an electronic medical or health record system for exchange of patient data between facilities may decide against choosing a set of Optional indicators which monitor each step of a referral process (e.g. OPT2.2.1–OPT2.2.4); a feasible alternative may be to use one indicator from the set with data sourced from a single location (e.g. OPT2.2.1) or a Core indicator (e.g. C2.1) to act as a proxy and flag the need for more in-depth investigation.

TABLE 3.16
Optional indicators: screening – all strategies and methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT1.1 SCREENED WITHIN TARGET AGE RANGE	Proportion of women screened for the first time who were within the national programme target age range	**NUMERATOR**: Number of women screened for the first time who were within the national programme target age range at the time of screening. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Total number of women screened for the first time. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: HIV Status, Screening Method **BENCHMARK**: At least 70% of the women screened are within the target age group (see Table 3.9) **CONSIDERATIONS** • While this indicator is similar to Indicators G1.0 and C1.0, the different denominators allow the monitoring of different programme aspects.
OPT1.2 PROGRESS TOWARD SCREENING TARGET	Percentage of screening target reached in the past year, quarter, or month	**NUMERATOR**: Number of women who have been screened in the past year, quarter, or month. **DATA SOURCE**: Cervical cancer service delivery data (screening facility; subnational or national aggregate data) **DENOMINATOR**: Annual, quarterly or monthly screening target. **DATA SOURCE**: Facility, subnational, or national level monitoring plan **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: HIV Status, Screening Method **CONSIDERATIONS** • The numerator should carry the same parameters as the denominator; for example, if the annual (or quarterly or monthly) screening target is restricted to women aged 30–49; only the number of women aged 30–49 who have been screened in that time period should be included in the numerator.
OPT1.3 RESCREENED WITHIN TARGET INTERVAL	Percentage of women who were rescreened (after a previous negative result) within the recommended screening interval	**NUMERATOR**: Number of women who have been rescreened within the recommended screening interval. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Number of women who have been rescreened. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV Status **CONSIDERATIONS** • As a programme matures, countries should consider adding an additional performance indicator which measures whether women that **should** return for routine rescreening in a given time period **are returning in that time period** (e.g. number of rescreened women in a given time period, over the number of women who were expected to be rescreened in the same time period) • WHO recommends that women who receive a negative cervical cancer test result be rescreened every 3–5 years, and every 3 years for HIV-positive women or women of unknown HIV status. If population-specific screening intervals are used by the national programme, each should be monitored by its own specific indicator.
OPT1.4 PRECANCEROUS LESION POST-TREATMENT FOLLOW-UP	Percentage of women treated for precancerous lesions who returned for a **post-treatment follow-up screening test at 1 year**	**NUMERATOR**: Number of women treated in the previous year for precancerous lesions who returned for a post-treatment follow-up screening test at 1 year. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Number of women treated in the previous year for precancerous lesions. **DATA SOURCE**: Cervical cancer service delivery data (treatment facility or screening facility – referral feedback) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV Status, Treatment Type **CONSIDERATIONS** • Some programmes require post-treatment follow-up screening at intervals other than or in addition to 1 year (e.g. 6 months and 12 months) – this indicator should be adjusted to match national guidelines for post-treatment follow-up screening.
OPT2.0.1 PRE-CANCEROUS LESION CURE RATE	Percentage of women who **received a negative screening test result at their post-treatment follow-up at 1 year**	**NUMERATOR**: Number of women who received a negative screening test result at their post-treatment follow-up at 1 year. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Number of women treated in the previous year for precancerous lesions. **DATA SOURCE**: Cervical cancer service delivery data (treatment facility or screening facility – referral feedback) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Method, Treatment Type **CONSIDERATIONS** • For the purpose of this indicator, the "cure rate" is the percentage of women treated in the previous year that return for routine rescreening and have a negative result at the second screening; this does not require that resolution of precancerous lesions be definitively confirmed by histopathology. • This indicator is specific to treatment for precancerous lesions, and does not include treatment for invasive cancer.

TABLE 3.17
Optional indicators: Screen and/or triage – screen, triage and treat strategies; HPV testing and cytology

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT1.0.1 SCREENING TEST FAILURE	Percentage of women whose sample was tested more than once due to error	**NUMERATOR**: Number of women whose sample was tested more than once due to error (e.g. technician error, power failure). **DATA SOURCE**: Cervical cancer service delivery data (feedback on laboratory linkage form accompanying sample) and/or laboratory data **DENOMINATOR**: Total number of women with a laboratory/cytology screening test (HPV test, Pap smear) result. **DATA SOURCES**: Cervical cancer service delivery data (feedback on laboratory linkage form accompanying sample) and/or laboratory data **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Procedure Purpose (screening or triage) **CONSIDERATIONS** • This indicator is applicable to screening methodologies which require sample collection and processing (e.g. HPV testing, Pap smear/cytology). • This indicator monitors process from the **screening programme side** using feedback from the laboratory. The laboratory side may also use this indicator, in addition to other indicators for monitoring laboratory test performance and quality. For laboratory monitoring, adaptation of the numerator and denominator to focus on samples only (rather than "women") may be considered. It is important to ensure that double-counting between the screening facility and the laboratory does not occur during reporting (e.g. if ***both*** the screening facility ***and*** the laboratory report into the same system on this indicator).
OPT1.0.2 INADEQUATE SAMPLE	Percentage of women whose sample was inadequate for test completion	**NUMERATOR**: Number of women whose sample was inadequate for test completion. **DATA SOURCE**: Cervical cancer service delivery data (feedback on laboratory linkage form accompanying sample) and/or laboratory data **DENOMINATOR**: Number of women from whom a sample was obtained. **DATA SOURCES**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV Status, Procedure Purpose (screening or triage), Sample Collection Method (for HPV testing – self-collected, provider collected) **CONSIDERATIONS** • "Inadequate" means that a sample was obtained but could not be processed due its condition – this includes lost samples, improperly fixed slides, and spilled samples. • This indicator is applicable to screening methodologies which require sample collection and processing (e.g. HPV testing, Pap smear/cytology). • This indicator monitors process from the **screening programme side**, and allows providers to ensure that they are obtaining quality samples. The laboratory side may use this indicator, as well as additional indicators for monitoring laboratory test performance and quality. For laboratory monitoring, adaptation of the numerator and denominator to focus on samples only (rather than "women") may be considered. It is important to ensure that double-counting between the screening facility and the laboratory does not occur during reporting (e.g. if ***both*** the screening facility ***and*** the laboratory report into the same system on this indicator).
OPT1.0.3 RECEIVED TEST RESULTS	Percentage of women who received their screening test results	**NUMERATOR**: Number of women who received the results of their screening test. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Total number of women with a screening test result. **DATA SOURCES**: Cervical cancer laboratory data or service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Method, Screening Visit Type **CONSIDERATIONS** • This indicator is important for monitoring whether patients are returning to obtain results, as well as for monitoring the linkages between the screening facility and the laboratory, and therefore is most applicable to screening methodologies that do not allow for immediate or same-day return of screening results. • If monitored frequently at the facility, this indicator can be used to flag the need for active follow-up with screened women who do not know their results.
OPT5.0 RESULTS TURN-AROUND TIME	Number of days between sample collection and return of results to screened women	**NUMBER**: Average number of days between sample collection and return of results to screened women. **DATA SOURCE**: Cervical cancer programme data (screening or triage facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Facility Level *(or Facility Name)*, Laboratory or Pathology Procedure *(or Type of Sample)* **CONSIDERATIONS**: • This indicator is intended to monitor results turn-around-time for screening (or triage) tests, but may also be adapted for monitoring results turn-around-time for other testing (e.g. biopsy). • For strategies using HPV testing with self-collected HPV samples routed through health facilities, "sample collection" refers to the date the woman collected her sample, and NOT to the date that the sample was received by the routing facility.

Table 3.17 continued

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT5.0.1 SAMPLE SUBMISSION TIME	Number of days between sample collection and transport of sample to laboratory	**NUMBER**: Average number of days between sample collection and transport of sample to laboratory. **DATA SOURCE**: Cervical cancer programme data (screening or triage facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Facility Level *(or Facility Name)*, Laboratory or Pathology Procedure *(or Type of Sample)* **CONSIDERATIONS**: • This indicator is intended to monitor sample transport for screening (or triage) tests, but may also be adapted for monitoring transport for other testing (e.g. biopsy) For strategies using HPV testing: • Test manufacturers' manuals should be consulted to determine the optimal amount of time for sample viability – this can be used as a benchmark against which this indicator can be monitored. • For self-collected HPV samples routed through health facilities, "sample collection" refers to the date the woman collected her sample, and NOT to the date that the sample was received by the routing facility.
OPT5.0.2 LABORATORY PROCESSING TIME	Number of days between laboratory receipt of sample and return of results to facility	**NUMBER**: Average number of days between laboratory receipt of sample and return of results to facility. **DATA SOURCE**: Cervical cancer programme data (screening or triage facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Facility Level *(or Facility Name)*, Laboratory or Pathology Procedure *(or Type of Sample)* **CONSIDERATIONS**: • For strategies using HPV testing, test manufacturers' manuals should be consulted to determine the optimal amount of time for sample viability – this can be used as a benchmark against which this indicator can be monitored. • This indicator is intended to monitor screening (or triage) test processing time and return, but may also be adapted for monitoring processing and return for other testing (e.g. biopsy)
OPT5.0.3 RESULTS COMMUNICATION TURN-AROUND TIME	Number of days between facility receipt of results and return of results to screened women	**NUMERATOR**: Average number of days between facility receipt of results and return of results to screened women. Data source: Cervical cancer programme data (screening or triage facility or laboratory) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Facility Level *(or Facility Name),* Laboratory or Pathology Procedure, Method of Results Provision *(e.g. SMS message, In-Person)* **CONSIDERATIONS** • This indicator is intended to monitor screening (or triage) results communication, but may also be adapted for monitoring results communication for other testing (e.g. biopsy)

OPT2.2.1–OPT2.2.3 measure each step in the referral process and require data from multiple sites. Where an electronic patient medical or health record systems is not in use, an indicator such as C2.1 may be monitored as a proxy in order to flag need for more in-depth investigation.

TABLE 3.18
Optional indicators: Triage – screen, triage and treat strategies; all methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT2.2.1 TRIAGE EXAMINATION PROVISION	Percentage of screen-positive women who attended the triage visit and received a triage examination	**NUMERATOR**: Number of screen-positive women who attended the triage examination visit and received a triage examination. **DATA SOURCE**: Cervical cancer service delivery data (triage facility) **DENOMINATOR**: Number of screen-positive women who attended the triage examination visit. **DATA SOURCE**: Cervical cancer service delivery data (triage facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: HIV Status, Age Group/Range, Screening Method, Screening Visit Type **CONSIDERATIONS** • This indicator is applicable to screening strategies that include a triage step between the primary screening test and precancerous lesion treatment or further evaluation and diagnosis. • This indicator monitors service provision and referral process by measuring completion of a triage examination for women attending a triage visit. This is useful in identifying issues with triage examination provision due to a number of reasons (e.g. stockouts, women presenting for triage with cervicitis or other infection preventing examination completion, etc.). Note that this indicator and OPT2.2.2 and OPT2.2.3 differ from C2.1 in that they have been restricted to focus on the referral process.

Table 3.18 continued

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT2.2.2 TRIAGE REFERRAL COMPLIANCE	Percentage of screen-positive women referred for triage who attended the triage visit	**NUMERATOR**: Number of screen-positive women referred for triage examination who attended the triage visit. **DATA SOURCE**: Cervical cancer service delivery data (triage facility) **DENOMINATOR**: Number of screen-positive women referred for triage examination. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: HIV Status, Age Group/Range, Screening Method, Screening Visit Type **CONSIDERATIONS** • This indicator is applicable to screening strategies that include a triage step between the primary screening test and precancerous lesion treatment or further evaluation and diagnosis. • This indicator monitors referral process by measuring referral compliance. Note that this indicator and OPT2.2.1 and OPT2.2.3 differ from C2.1 in that they have been restricted to focus on the referral process.
OPT2.2.3 REFERRED FOR TRIAGE	Percentage of screen-positive women who were referred for triage examination	**NUMERATOR**: Number of screen-positive women who were referred for triage examination. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Number of screen-positive women. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: HIV Status, Age Group/Range, Screening Method, Screening Visit Type **CONSIDERATIONS** • This indicator is applicable to screening strategies that include a triage step between the primary screening test and precancerous lesion treatment or further evaluation and diagnosis. • This indicator monitors referral process by measuring whether those requiring referral obtained referral. Note that this indicator and OPT2.2.1 and OPT2.2.2 differ from C2.1 in that they have been restricted to focus on the referral process.
OPT2.2.4 RECEIVED TRIAGE RESULTS	Percentage of women who received their triage examination results	**NUMERATOR**: Number of women who received the results of their triage examination. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility – depending on national protocol) **DENOMINATOR**: Total number of women with a triage examination result. **DATA SOURCES**: Cervical cancer laboratory data or service delivery data (triage facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV Status, Triage Method **CONSIDERATIONS** • This indicator is important for monitoring whether patients are returning to obtain results, as well as for monitoring the linkages between the screening/triage facility and the laboratory, and therefore is most applicable to triage methodologies that do not allow for immediate or same-day return of results. • If monitored frequently at the facility, this indicator can be used to flag the need for active follow-up with women who do not know the results of their triage examination.
OPT2.3 SCREENED WOMEN REQUIRING TREATMENT	Percentage of screened women with a **positive triage examination result** in a given time period	**NUMERATOR**: Number of screened women with a **positive triage examination result** in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (triage facility) **DENOMINATOR**: Number of screened women. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range*, HIV Status, Screening Visit Type*, Triage Method *See Considerations under C2.0, and Indicator Disaggregation guiding information **CONSIDERATIONS** • This indicator is applicable to screening strategies that include a triage step between the primary screening test and precancerous lesion treatment or further evaluation and diagnosis. • While this indicator seems similar to C2.2, the changes to the numerator and denominator allow the measurement of the percentage of [first time] screened women who ultimately required treatment a trend key to the prospective estimation of material and financial resources. - An additional companion statistic can also be calculated by adjusting the denominator to capture *screen-positive women*, rather than *screened women*. This adaptation allows the measurement of the "percentage of screen-positives who received a positive triage examination result"; thereby supplementing the information provided by OPT2.3 and strengthening ability to monitor trends and forecast need and required resources.

OPT3.4.1–OPT3.4.2 and OPT3.5.1–OPT3.5.2 measure each step in the referral process and require data from multiple sites. Where an electronic patient medical or health record systems is not in use, indicators such as 3.4 and 3.5 may be monitored as proxies in order to flag need for more in-depth investigation.

TABLE 3.19

Optional indicators: Treatment – all screening strategies and methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT3.1 PRECANCEROUS LESION TREATMENT	Percentage of screen-positive women who are eligible for cryotherapy or LEEP who receive cryotherapy or LEEP	**NUMERATOR**: Number of screen-positive women with lesions eligible for cryotherapy or LEEP who received that treatment in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility and/or precancerous lesion treatment referral facility) **DENOMINATOR**: Number of screen-positive women with lesions eligible for cryotherapy or LEEP in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility and/or precancerous lesion treatment referral facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, HIV status, Screening Method, Screening Visit Type, Treatment Method **BENCHMARK**: At least 90% eligible for treatment of precancerous lesions receiving treatment (see Table 3.9) **CONSIDERATIONS** • It is vital that all women requiring treatment for precancerous lesions receive the treatment for which they are eligible – the purpose of this indicator is to monitor whether women requiring (and eligible for) treatment for precancerous lesions received treatment. Programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies may adapt this indicator to better suit the context, while still maintaining the purpose of the indicator (e.g. replace *screen-positive* with *triage-positive* – see earlier Monitoring Screening and Triage Strategies subsection). • The considerations for OPT3.3 Treatment with Cryotherapy and OPT3.4 Treatment with LEEP include information to guide calculation of additional statistics that can assist in tracking service delivery trends and estimating need for precancerous lesion services in order to forecast the resources and supplies needed to meet that demand. • Recommended to be calculated over a 12-month period or more frequently depending on QA/QI needs.
OPT3.2 POST-TREATMENT COMPLICATION	Percentage of women receiving cryotherapy or LEEP who returned with a **post-treatment complication**	**NUMERATOR**: Number of women receiving cryotherapy or LEEP who returned with a post-treatment complication. **DATA SOURCE**: Cervical cancer service delivery data (screening or precancerous lesion treatment facility) **DENOMINATOR**: Number of women receiving cryotherapy or LEEP. **DATA SOURCE**: Cervical cancer service delivery data (precancerous lesion treatment facility or screening facility referral feedback) **FREQUENCY**: Annually **DISAGGREGATION**: HIV Status, Treatment Type

Table 3.19 continued

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT3.3 TREATMENT WITH CRYOTHERAPY	Percentage of screen-positive women with lesions eligible for cryotherapy who **received cryotherapy**	**NUMERATOR**: Number of screen-positive women with lesions eligible for cryotherapy who received cryotherapy in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage or cryotherapy facility) **DENOMINATOR**: Number of screen-positive women with lesions eligible for cryotherapy in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage or cryotherapy facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV status, Screening Method, Screening Visit Type **CONSIDERATIONS** • It is vital that all women requiring treatment for precancerous lesions receive the treatment for which they are eligible. Programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies, may adapt this indicator to better suit the context (e.g. replace *screen-positive* with *triage-positive* – see earlier Monitoring Screening and Triage Strategies subsection) while still maintaining the purpose of the indicator: **to monitor whether all women eligible for cryotherapy received cryotherapy**. • Received cryotherapy includes women receiving same-day treatment (SVA), women who received cryotherapy after postponing, and women who received cryotherapy as the result of a referral- all within a given time period. • Should be calculated and reviewed frequently with high facility caseload. • To track trends in service delivery, and support forecasting of resources and supplies to meet the expected demand, additional statistics can be calculated by adapting the numerator and denominator of this indicator: - Percentage of **screen-positive** women **eligible for cryotherapy** in a given time period (Numerator: Number of screen-positive women with lesions eligible for cryotherapy in a given time period; Denominator: Number of **screen-positive** women in a given time period) - Percentage of **screened** women **eligible for cryotherapy** in a given time period (Numerator: Number of screen-positive women with lesions eligible for cryotherapy in a given time period; Denominator: Number of **screened** women in a given time period) - Percentage of **screened** women who **received cryotherapy** in a given time period (Numerator: Number of screened women who received cryotherapy in a given time period; Denominator: Number of **screened** women in a given time period)
OPT3.4 TREATMENT FOR LARGE LESIONS	Percentage of screen-positive women eligible for LEEP who received LEEP	**NUMERATOR**: Number of screen-positive women eligible for LEEP who received LEEP in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (LEEP facility) **DENOMINATOR**: Number of screen-positive women eligible for LEEP in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (LEEP facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV status, Screening Visit Type **CONSIDERATIONS** • Programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies, may adapt this indicator to better suit the context (e.g. replace *screen-positive* with *triage-positive* – see earlier Monitoring Screening and Triage Strategies subsection) while still maintaining the purpose of the indicator: **to monitor whether all women determined eligible for LEEP received LEEP**. • To track trends in service delivery, and support forecasting of resources and supplies to meet the expected demand, additional statistics can be calculated by adapting the numerator and denominator of this indicator: - Percentage of **screened** women **eligible for LEEP** in a given time period (Numerator: Number of screen-positive women with large lesions eligible for LEEP in a given time period; Denominator: Number of **screened** women in a given time period) - Percentage of **screened** women who **received LEE**P in a given time period (Numerator: Number of screen-positive women who received LEEP in a given time period; Denominator: Number of **screened** women in a given time period) • Should be calculated and reviewed quarterly or monthly with high facility caseload.

Table 3.19 continued

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT3.4.1 LARGE LESION TREATMENT ELIGIBILITY	Percentage of screen-positive women referred for large lesions who were eligible for LEEP	**NUMERATOR**: Number of screen-positive women referred for large lesions who were determined eligible for LEEP at the referral visit. **DATA SOURCE**: Cervical cancer service delivery data (LEEP facility) **DENOMINATOR**: Number of screen-positive women referred for large lesions. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Method, Screening Visit Type **CONSIDERATIONS** • Programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies, may adjust the wording of these indicators to better suit the context (see below and earlier Monitoring Screening and Triage Strategies subsection) while still maintaining the purpose of the indicator: **to monitor the number of women identified as having large lesions (not eligible for cryotherapy) who are determined eligible for LEEP treatment**. • Indicators monitoring referral processes should be adapted to fit programme context: - Depending on screening strategy, women may be referred for evaluation of large lesions at the screening visit, or at the triage visit. Additional disaggregation may be used to monitor the point of referral. - Women may be referred to colposcopy for evaluation of large lesions – programmes may choose to use this indicator, or may adapt and use the colposcopy-specific indicators (OPT3.6 and OPT3.6.1).
OPT3.4.2 LARGE LESION REFERRAL	Percentage of screen-positive women **referred** for large lesions (lesions not eligible for cryotherapy)	**NUMERATOR**: Number of screen-positive women referred for large lesions (lesions not eligible for cryotherapy). **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **DENOMINATOR**: Number of screen-positive women with large lesions (lesions not eligible for cryotherapy). **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Method, Screening Visit Type **CONSIDERATIONS** • Programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies, may adjust the wording of these indicators to better suit the context (see below and earlier Monitoring Screening and Triage Strategies subsection) while still maintaining the purpose of the indicator: **to monitor whether all women identified as having large lesions (not eligible for cryotherapy) are referred for LEEP eligibility determination**. • Indicators monitoring referral processes should be adapted to fit programme context: - Depending on screening strategy, women may be referred for evaluation of large lesions at the screening visit, or at the triage visit. Additional disaggregation may be used to monitor the point of referral. - Women may be referred to colposcopy for evaluation of large lesions – programmes may choose to use this indicator, or may adapt and use the colposcopy-specific indicators (OPT3.6 and OPT3.6.1).
OPT3.5 SUSPECTED CANCER TREATMENT AND FOLLOW-UP	Percentage of women with **suspected invasive cancer on VIA* who completed appropriate treatment or follow-up** *[Additional VIA indicator, WHO, 2013]*	**NUMERATOR**: Number of women with suspected invasive cancer on VIA* who complete appropriate treatment or follow-up. **DATA SOURCES**: Cancer Registry or Hospital (diagnostics + treatment) + Cervical cancer service delivery data (screening + referral + diagnostics) **DENOMINATOR**: Number of women with suspected invasive cancer on VIA* **This indicator is presented as written in the WHO guidance, however it may be adapted to include other screening methods, or to monitor treatment and follow-up of those suspected of having invasive cancer at a triage visit.* **DATA SOURCES**: Cervical cancer service delivery data (screening/referring site) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV Status, Treatment Type, Screening Visit Type **CONSIDERATIONS** • The complexity of this indicator requires that patient screening result, referral outcome, and treatment/follow up outcome be tracked across both the service delivery data as well as the cancer registry data.

Table 3.19 continued

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT3.5.1 SUSPECTED CANCER REFERRAL COMPLIANCE	Percentage of screen-positive women referred for suspected cancer who attended the referral visit	**NUMERATOR**: Number of screen-positive women referred for suspected cancer who attended the referral visit. **DATA SOURCE**: Cervical cancer service delivery data (referral facility) **DENOMINATOR**: Number of screen-positive women referred for suspected cancer. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Visit Type **CONSIDERATIONS** • While similar to C2.4 Suspected Cancer Cases, this indicator is intended to monitor referral processes. • Programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies, may adapt this indicator to better suit the context (see below and earlier Monitoring Screening and Triage Strategies subsection) while still maintaining the purpose of the indicator: **to monitor whether all women referred for further evaluation of lesions suspicious for cancer attended the referral visit**. • Indicators monitoring referral processes should be adapted to fit programme context: - Depending on screening strategy, women may be referred for suspected invasive cancer at the screening visit, or at the triage visit. Additional disaggregation may be used to monitor the point of referral. - Women are commonly referred to colposcopy for evaluation of large lesions – programmes may choose to use this indicator, or may adapt and use the colposcopy-specific indicators (OPT3.6 and OPT3.6.1).
OPT3.5.2 SUSPECTED CANCER REFERRAL	Percentage of screen-positive women **referred** for suspected cancer	**NUMERATOR**: Number of screen-positive women referred for suspected cancer. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **DENOMINATOR**: Number of screen-positive women with suspected cancer. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Visit Type **CONSIDERATIONS** • While similar to C2.4 Suspected Cancer Cases, this indicator is intended to monitor referral processes. • Programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies, may adapt this indicator to better suit the context (see below and earlier Monitoring Screening and Triage Strategies subsection) while still maintaining the purpose of the indicator: **to monitor whether all women with lesions suspicious for cancer were referred for further evaluation**. • Indicators monitoring referral processes should be adapted to fit programme context: - Depending on screening strategy, women may be referred for suspected invasive cancer at the screening visit, or at the triage visit. Additional disaggregation may be used to monitor the point of referral. - Women are commonly referred to colposcopy for evaluation of large lesions – programmes may choose to use this indicator, or may adapt and use the colposcopy-specific indicators (OPT3.6 and OPT3.6.1).
OPT3.6 COLPOSCOPY REFERRAL COMPLIANCE	Percentage of screen-positive women referred for colposcopy who attend the colposcopy visit	**NUMERATOR**: Number of screen-positive women referred for colposcopy who attended the colposcopy visit. **DATA SOURCE**: Cervical cancer service delivery data (referral facility) **DENOMINATOR**: Number of screen-positive women referred for colposcopy. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Visit Type **CONSIDERATIONS** • Programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies, may adapt this indicator to better suit the context (see below and earlier Monitoring Screening and Triage Strategies subsection) while still maintaining the purpose of the indicator: **to monitor whether all women referred for further evaluation with colposcopy attended the colposcopy visit**. - If colposcopy is being used as a triage examination (i.e. to determine *if* the women will be treated), the wording of this indicator does not need to be adapted – all women with a positive primary screening test should be counted under *screen-positive*. • Indicators monitoring referral processes should be adapted to fit programme context: - Depending on screening strategy, women may be referred for colposcopy at the screening visit, or at the triage visit. Additional disaggregation may be used to monitor the point of referral. - Women are commonly referred to colposcopy for evaluation of large lesions or suspected cancer – programmes may choose to use colposcopy specific indicators (OPT3.6 and OPT3.6.1), or may adapt and use other indicators monitoring referral processes

Table 3.19 continued

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT3.6.1 COLPOSCOPY REFERRAL	Percentage of screen-positive women who were referred for colposcopy	**NUMERATOR**: Number of screen-positive women **referred** for colposcopy. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **DENOMINATOR**: Number of screen-positive women. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Visit Type **CONSIDERATIONS**: • For programmes using either a screen-triage-treat strategy, or a combination of screen-treat AND screen-triage-treat strategies, may adapt this indicator to better suit the context (see below and earlier Monitoring Screening and Triage Strategies subsection) while still maintaining the purpose of the indicator: **to monitor whether all women requiring further evaluation with colposcopy were referred for a colposcopy visit**. - If colposcopy is being used as a triage examination (i.e. to determine *if* the women will be treated), the wording of this indicator does not need to be adapted – all women with a positive primary screening test should be counted under *screen-positive*. Where colposcopy is used as triage, this indicator assists in tracking trends and forecasting demand and resources. • Indicators monitoring referral processes should be adapted to fit programme context: - Depending on screening strategy, women may be referred for colposcopy at the screening visit, or at the triage visit. Additional disaggregation may be used to monitor the point of referral. - Women are commonly referred to colposcopy for evaluation of large lesions or suspected cancer – programmes may choose to use colposcopy specific indicators (OPT3.6 and OPT3.6.1), or may adapt and use other indicators monitoring referral processes
OPT3.7 CONFIRMED CANCER	Percentage of screen-positive women diagnosed with cancer	**NUMERATOR**: Number of screen-positive women diagnosed with cancer. **DATA SOURCES**: Cancer Registry or Hospital (confirmed diagnosis) + Cervical cancer service delivery data (screening and diagnosis) **DENOMINATOR**: Number of screen-positive women. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Annually **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Visit Type **CONSIDERATIONS** • It is important for both patient and programme monitoring to be able to compare the rate of cancer in first time screenings, rescreenings and post-treatment 1 year follow-up screenings, therefore disaggregation by Screening Visit Type is strongly recommended. • For programmes using a screen-triage-treat strategy *screen-positive* refers to all women testing positive on a primary screening test. • To track trends in service delivery, and support forecasting of resources and supplies to meet the expected demand, additional statistics can be calculated by adapting the numerator and denominator of this indicator: - Percentage of **screened** women **diagnosed with cancer** in a given time period (Numerator: Number of **screened** women diagnosed with cancer; Denominator: Number of **screened** women in a given time period) - Percentage of **triage-positive** women **diagnosed with cancer** in a given time period (Numerator: Number of **triage-positive** women diagnosed with cancer in a given time period; Denominator: Number of **triage-positive** women in a given time period)

TABLE 3.20
Optional indicators: Treatment – all screening strategies; methods which allow same-day results

These indicators are most applicable for screening or triage methods which allow same day results and determination of the need for precancerous lesion treatment (e.g. VIA, colposcopy without biopsy, some methods of HPV testing); however, OPT3.3.2–OPT3.3.4 can be adapted to other methods.

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT3.3.1 SINGLE VISIT APPROACH RATE	Percentage of VIA-positive women with lesions eligible for cryotherapy treated during the same visit *[Additional VIA indicator, WHO, 2013]*	**NUMERATOR**: Number of VIA-positive women with lesions eligible for cryotherapy who were treated with cryotherapy during the same visit. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **DENOMINATOR**: Number of VIA-positive women with lesions eligible for cryotherapy. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV status, Screening Visit Type **CONSIDERATIONS** • This indicator is intended for use by programmes using a VIA Alone screening strategy, but could potentially be used by programmes using an HPV Test Alone strategy, provided HPV Test results are available at the same visit (for example, through point-of-care testing via GeneXpert[1]). Programmes using VIA (or colposcopy) as triage can also use this indicator to monitor the Single Visit Approach Rate at triage visits. • Should be calculated and reviewed quarterly or monthly with high facility caseload.
OPT3.3.2 POSTPONED CRYOTHERAPY	Percentage of VIA-positive women, with lesions eligible for cryotherapy who **postponed cryotherapy**	**NUMERATOR**: Number of VIA-positive women with lesions eligible for cryotherapy, who postponed cryotherapy. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **DENOMINATOR**: Number of VIA-positive women with lesions eligible for cryotherapy. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage facility) **FREQUENCY**: Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV status, Screening Visit Type **CONSIDERATIONS** • This indicator is primarily applicable to programmes using a VIA Alone screening strategy, with a Single Visit Approach. Programmes using VIA as triage can also use this indicator to monitor treatment postponement at triage visits. Programmes using other screening and treatment strategies may adapt the indicator for use, provided that the meaning of "postponed treatment" is clearly defined for the context.
OPT3.3.3 CRYOTHERAPY AFTER POSTPONEMENT	Percentage of VIA-positive women, with lesions eligible for cryotherapy who **were treated with cryotherapy after postponing**	**NUMERATOR**: Number of VIA-positive women with lesions eligible for cryotherapy who were treated with cryotherapy after postponing. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage or cryotherapy facility) **DENOMINATOR**: Number of VIA-positive women with lesions eligible for cryotherapy who postponed cryotherapy. **DATA SOURCE**: Cervical cancer service delivery data (screening or triage or cryotherapy facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Visit Type **CONSIDERATIONS** • This indicator is primarily applicable to programmes using a VIA Alone screening strategy, with a Single Visit Approach. Programmes using VIA as triage can also use this indicator to monitor treatment postponement at triage visits. Programmes using other screening and treatment strategies may adapt the indicator for use, provided that the meaning of "postponed treatment" is clearly defined for the context.
OPT3.3.4 DID NOT RETURN FOR CRYOTHERAPY	Percentage of VIA-positive women, eligible for cryotherapy who **did not return for cryotherapy** after postponing	**NUMERATOR**: Number of VIA-positive women, with lesions eligible for cryotherapy, who did not return for cryotherapy after postponing. Data source: Cervical cancer service delivery data (screening or triage or cryotherapy facility) **DENOMINATOR**: Number of VIA-positive women, with lesions eligible for cryotherapy, who postponed cryotherapy. Data source: Cervical cancer service delivery data (screening or triage or cryotherapy facility) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, HIV status, Screening Visit Type **CONSIDERATIONS** • This indicator is primarily applicable to programmes using a VIA Alone screening strategy, with a Single Visit Approach. Programmes using VIA as triage can also use this indicator to monitor treatment postponement at triage visits. Programmes using other screening and treatment strategies may adapt the indicator for use, provided that the meaning of "postponed treatment" is clearly defined for the context.

[1] GeneXpert is a molecular diagnostic platform from Cepheid (Sunnyvale, CA, USA)

TABLE 3.21
Optional indicators: Programme and service delivery – all screening strategies and methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT4.1 PROPORTION OF TRAINED SERVICE PROVIDERS PROVIDING SERVICES	Proportion of service providers trained in cervical cancer screening and treatment services who are currently providing those services	**NUMERATOR**: Number of service providers trained in cervical cancer screening and treatment services who are currently providing those services. **DATA SOURCES**: Facility or programme data; Provider Registry (if current); Facility-based survey tools (See Section 4 of Toolkit) **DENOMINATOR**: Number of service providers trained in cervical cancer screening and treatment services. **DATA SOURCES**: Facility or programme data; Provider Registry (if current); Facility-based survey tools (See Section 4 of Toolkit) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Cadre, Facility Level, Provider Screening and Treatment Services, Service Provision Schedule (e.g. Full-time, Part-time; or 1–3 days per week, 3+ days per week; etc.) **CONSIDERATIONS** • The numerator and denominator should reflect the level at which this indicator is being monitored (e.g. For Subnational level: Total number of trained providers currently providing services in the **District**, over the total numbers of trained providers in the **District**) • In some cases, trained service providers rotate between different facilities, therefore de-duplication is key in order to have an accurate picture of service provider availability.
OPT4.2 PROPORTION OF STATIC FACILITY SCREENINGS	Proportion of cervical cancer screenings conducted at a static facility site	**NUMERATOR**: Total number of cervical cancer screenings conducted at a static facility site. **DATA SOURCE**: Cervical cancer programme data **DENOMINATOR**: Total number of cervical cancer screenings. **DATA SOURCE**: Cervical cancer programme data **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, Facility Level, HIV Status, Screening Method **CONSIDERATIONS** • The numerator and denominator should reflect the level at which this indicator is being monitored (e.g. For Subnational level: Total number of facility screenings conducted in the **District**, over the total numbers of screenings in the **District**)
OPT4.2.1 PROPORTION OF MOBILE SCREENINGS	Proportion of cervical cancer screenings conducted through routine outreach using a mobile screening approach	**NUMERATOR**: Total number of cervical cancer screenings conducted through outreach using a mobile screening approach. **DATA SOURCE**: Cervical cancer programme data **DENOMINATOR**: Total number of cervical cancer screenings. Data source: Cervical cancer programme data **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, HIV Status, Screening Method **CONSIDERATIONS** • The numerator and denominator should reflect the level at which this indicator is being monitored (e.g. For Subnational level: Total number of screenings conducted through outreach in the **District**, over the total numbers of screenings in the **District**)
OPT4.3 NUMBER OF COMMUNITY CAMPAIGNS	Number of **community campaigns** including mass screening campaigns/ periodic outreaches	**DATA SOURCE**: Cervical cancer service delivery data **FREQUENCY**: Annually **DISAGGREGATION**: Campaign Type (e.g. mass media, screening campaign), Target Audience (e.g. women within or outside of the target age group, men, HIV positive, pregnant women, etc.)

TABLE 3.22
Optional indicators: Programme and service delivery – all screening strategies; HPV testing

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT4.4 PROPORTION OF SELF-COLLECTED SAMPLES	Proportion of HPV screening tests conducted using a self-collected sample	**NUMERATOR**: Total number of samples tested with an HPV screening test that were self-collected. **DATA SOURCE:** Cervical cancer programme data (screening facility or laboratory) **DENOMINATOR**: Total number of samples tested with an HPV screening test *Total includes only those samples that were obtained from a client for the purposes of screening – does not include any "control" or "reference" samples.* **DATA SOURCE:** Cervical cancer programme data (laboratory) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, HIV Status*, Screening Visit Type *If self-collected samples (and therefore patient information) are not collected at a facility, considerations must be made to protect patient privacy and confidentiality. If confidentiality cannot be ensured, HIV status should not be collected.

TABLE 3.23
Optional indicators: HIV service integration – all screening strategies and methods

INDICATOR	DEFINITION	METHOD OF MEASUREMENT
OPT6.0 FIRST TIME SCREENING RATE FOR WOMEN LIVING WITH HIV/ AIDS	Percentage **of HIV positive women** enrolled in HIV care and treatment who received their **first cervical cancer screening in a given time period**	**NUMERATOR**: Total number of HIV positive women enrolled in HIV care and treatment *within the target age range* screened for the first time for cervical cancer in a given time period. **DATA SOURCES**: Cervical cancer service delivery data (screening facility) + HIV care and treatment service delivery data (HIV care and treatment site) **DENOMINATOR**: Total number of HIV positive women enrolled in care and treatment *within the target age range* in a given time period. **DATA SOURCES**: HIV care and treatment service delivery data (HIV care and treatment site) **FREQUENCY**: Annually, Quarterly **DISAGGREGATION**: Age Group or Range, Progress Toward Target
OPT6.1 PITC SERVICE PROVISION	Percentage of women with previously **unknown HIV status who received PITC at their cervical cancer screening visit**, and now know their HIV status	**NUMERATOR**: Number of women with previously unknown HIV status who received a Positive or Negative PITC result at their cervical cancer screening visit in a given time period. **DATA SOURCES**: Cervical cancer service delivery data (screening facility) **DENOMINATOR**: Total number of women with unknown HIV status attending cervical cancer screening in a given time period. **DATA SOURCES**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range, HIV Status (*final PITC result*) **CONSIDERATIONS** • *Unknown HIV Status* typically includes those who have never been tested and those who received a negative result more than 3 months ago; however national guidelines should be referenced for definition.
OPT6.2 LINKAGE TO HIV SERVICES	Percentage of clients that **were linked to HIV Care and Treatment after receiving HIV positive result** at PITC during cervical cancer screening	**NUMERATOR**: Number of clients that were linked to HIV Care and Treatment after receiving **HIV positive result at** PITC during cervical cancer screening in a given time period. **DATA SOURCES**: Cervical cancer service delivery data (screening facility) + HIV care and treatment service delivery data (HIV care and treatment site) **DENOMINATOR**: Number of clients receiving HIV positive result at PITC during cervical cancer screening in a given time period. **DATA SOURCE**: Cervical cancer service delivery data (screening facility) **FREQUENCY**: Annually, Quarterly, Monthly **DISAGGREGATION**: Age Group or Range

MINIMUM DATA ELEMENTS CHECKLIST FOR CLIENT LEVEL DATA COLLECTION

The checklist below shows the minimum set of data elements **(in bold)** that should be included in a client screening and treatment form (or forms) to make immediate clinical decisions for patient management and to calculate core (and some optional) indicators for programme monitoring. Additional optional data elements (in green) may be included in a programme's standardized minimum data set as needed. Development of a standardized minimum dataset should include key stakeholders and be developed based on programme screening and treatment methods, referral system structure, and programme priorities. Compare this checklist with the form(s) currently used to determine gaps and support comprehensive monitoring.

CLIENT SCREENING AND TREATMENT FORM DATA ELEMENT CHECKLIST		
✓	DATA ELEMENT	COMMENT
FACILITY AND CLIENT INTAKE DATA		
	Facility name	
	Facility code	
	District	

Table continued

✓	DATA ELEMENT	COMMENT
	Visit date	
	General visit purpose (Screening, Triage, Treatment, or Post-treatment Complication)	
	Provider name	
	Client name (first, middle, last)	
	Client identification number *(national identification number or other unique identifier used by the facility)*	
	Client phone number(s)	
	Client next of kin phone number	
	Client age *(to classify clients as in or out of the target age range of years, or range set by the country)*	
	Client birth date	
	Date of last menstrual period	
	Client physical address *(physical address may be more useful than mailing address)*	
	Marital status	
	Demographic information (e.g. education, ethnicity, etc.)	
HIV Status		
	Last HIV test result (Positive; Negative [<3 months ago]; Unknown [negative: >3 months ago; inconclusive: never tested])	
	If last HIV test result is positive:	
	Date of positive test	
	Initial CD4count[a]	
	Initial CD4 date	
	Latest CD4 count	
	Latest CD4 date	
	On antiretroviral therapy (ART) or not on ART	
	Client referred for care and treatment	
	Where PITC[b] is offered: If last HIV test result is unknown, PITC accepted (yes, no)	
	If yes, date of PITC test	
	PITC final result (positive, negative)	
	PITC result received by client	
	FINAL HIV status (positive, negative, unknown)	
	Where PITC is not offered: If last HIV test result was negative [>3 months ago], inconclusive, or client has never been tested, client referred for HIV testing (yes, no)	
Client History		
	Screened for cervical cancer in the past (yes, no, not sure)	
	If yes, method of last screening (VIA or VILI, cytology/Pap smear, HPV DNA test, not sure)	
	If yes, result of last screening (positive, negative, not sure)	
	If yes, date of last screening	
	If last screening was positive, was treatment performed? (yes, no, not sure)	
	Is today's visit due to post-treatment complication?	
	If yes, method of treatment (cryotherapy, loop electrosurgical excision procedure [LEEP], not sure)	
	If yes, date of treatment	
	Reproductive health history and risk factors (e.g. gravidity, parity, contraception/family planning method, history of STIs[c], smoking, etc.)	
	Experiencing any symptoms (e.g. pelvic/lower abdominal pain, discharge, abnormal vaginal bleeding, etc.)	

Table continued

✓	DATA ELEMENT	COMMENT
SCREENING AND TRIAGE		
	Screening visit type (first-time screening; post-treatment follow-up screening at 1 year; rescreening [after last screening was negative])	
	Screening completed (yes, no [if no, give reason])	
	Symptoms of invasive cancer reported	
Colposcopy – See Treatment and Management		
Cytology		
	Purpose (screening, triage)	
	Specimen quality	
	Specimen code	
	Specimen collection date	
	Date specimen sent to laboratory	
	Date specimen received by laboratory	
	Date specimen processed	
	Results (Normal, ASCUS, ASC-H, LSIL, HSIL, Invasive Carcinoma, Inadequate, Inflammation)	
	Patient contacted about results management (yes, no)	
	Date results provided to screening site	
	Results communicated to client (yes, no)	
	Date results communicated to client	
	Name of provider communicating results	
	Date of expected rescreening (*according to national guidelines*)	
HPV Test		
	Purpose (screening, triage)	
	Specimen code	
	Specimen collection date	
	Date specimen sent to laboratory	
	Date specimen received by laboratory	
	Date specimen processed	
	Specimen collection method (by client, by provider)	
	HPV test kit number	
	Test result (negative, positive, retest required)	
	Date results provided to screening site	
	Results communicated to client (yes, no)	
	Date results communicated to client	
	Name of provider communicating results	
	Date of expected rescreening (*according to national guidelines*)	
VIA		
	Purpose (screening, triage)	
	Acetic acid not applied (yes, no [if no, give reason]) NOTE: *If acetic acid was not applied due to suspicion of cancer on speculum examination, screening should still be considered completed*	
	VIA result (negative; positive; positive, suspected cancer)	
	If positive, eligible for cryotherapy (yes, no)	
	Screening map	

Table continued

✓	DATA ELEMENT	COMMENT
	Findings (e.g. % cervix covered by lesion, entire lesion can be seen)	
	Digital cervicography performed (yes, no)	
	Date of expected rescreening (*according to national guidelines*)	
VILI		
	VILI result (negative; positive; positive, suspected cancer)	
	If positive, eligible for cryotherapy (yes, no)	
	Screening map	
	Findings (e.g. % cervix covered by lesion, entire lesion can be seen)	
	Date of expected rescreening (*according to national guidelines*)	
Other Clinical		
	External genital and speculum examination results	
	Clinical diagnosis and prescriptions	
REFERRAL		
	Name of site referred to and reason for referral	
	Referred for triage	
	Referred for cryotherapy	
	Referred for large lesion (not eligible for cryotherapy)	
	Referred for suspected cancer	
	Referred for invasive cancer	
	Referred for colposcopy	
	Referred for other gynaecological problem	
	Date referred and date of referral appointment	
TREATMENT AND MANAGEMENT		
Cold knife conisation		
	Treated with cold knife conisation (CKC) today	
Colposcopy *(histopathology results are core on laboratory results form)*		
	Purpose (triage, large lesion referral, suspected cancer referral or diagnosis)	
	Colposcopy done today (yes, no [if no, give reason])	
	Date of Colposcopy visit	
	Enhanced digital imaging done today (yes, no)	
	Colposcopy result (negative, positive for precancer, positive – suspected invasive cancer) *OR use categories for colposcopy impression*	
	Colposcopy impression (normal, inflammation, atypia/CIN1/condyloma/wart /leukoplakia/HPV change, CIN2-3, invasive carcinoma, inconclusive)	
	Colposcopy findings (e.g. SCJ[d] seen entirely, lesion thickness, % coverage, extension, atypical vessels, mosaicism, etc.)	
	Biopsy performed today (yes, no)	
	Location and number of biopsies	
	Endocervical curettage performed today (yes, no)	
	Histopathology result (e.g. normal, CIN 1, CIN 2. CIN 3, ASCUS, ASC-H, AGC, AIS, Sq. carcinoma, adenocarcinoma)	
	Follow-up plan (e.g. treatment, next screening)	
	Examiner's name	
Cryotherapy		

Table continued

✓	DATA ELEMENT	COMMENT
	Cryotherapy performed at screening visit *(for Single Visit Approach)* *or* **Cryotherapy performed today**	
	Cryotherapy performed at triage visit	
	Cryotherapy postponed *or* **No treatment performed** (insert reason)	
	Previously postponed cryotherapy performed today	
	Referred-in cryotherapy performed today	
	Referral for cryotherapy from (site name)	
	Date cryotherapy performed	
	Cryotherapy provider initials	
	Date of expected rescreening *(according to national guidelines)*	
LEEP		
	Eligible for LEEP (yes, no)	
	LEEP performed (yes, no)	
	Date LEEP performed	
	LEEP provider initials	
	LEEP excision and histology *(if applicable)*	
	Date of expected rescreening *(according to national guidelines)*	
Other Clinical		
	Prescriptions provided	
NOTES/FOLLOW-UP		
	Open text field for provider notes	

[a] CD4 count: number of CD4 cells in a cubic millimetre of blood; [b] PITC: provider-initiated testing and counselling; [c] STI: sexually-transmitted infection; [d] SCJ: squamocolumnar junction

REGISTER (OR LOGBOOK) MINIMUM DATA ELEMENTS CHECKLIST

This checklist shows the minimum set of data elements **(in bold)** that should be included in a facility screening and treatment register (or registers). The standardized minimum dataset for registers should be a subset of the minimum dataset for client level form(s), and should be sufficient to tally individual services and calculate indicators for programme monitoring. Additional optional data elements (in green) may be included in a programme's standardized minimum data set as needed. Development of a standardized minimum dataset should include key stakeholders and be developed based on programme screening and treatment methods, referral system structure, and programme priorities. Compare this list with the register(s) currently used to determine gaps and support comprehensive monitoring.

REGISTER DATA ELEMENTS CHECKLIST

✓	DATA ELEMENT	COMMENT
FACILITY INTAKE DATA		
	Facility name	
	Facility code	
	District	
	Month	
	Year	
CLIENT INTAKE DATA		
	Visit date	
	Purpose of visit (Screening, Triage, Treatment, Post-treatment complication [cryotherapy or LEEP])	

Table continued

✓	DATA ELEMENT			COMMENT
	Client identification number			
	Client name	Surname/ family name	First/ given name(s)	
	Phone number			
	Client next of kin phone number			
	Age	Date of Birth		
	Last HIV test result (positive, negative, unknown)			
	PITC accepted			
	Final HIV Status (positive, negative, unknown)			
SCREENING AND TRIAGE				
	Screening provider's initials			
	Screening visit type completed (First-time screening, 1 year follow-up post-treatment, Rescreening)			
	Screening not completed			
	Symptoms reported			
Colposcopy – see Treatment and Management				
Cytology				
	Purpose (screening, triage)			
	Specimen code			
	Specimen collection date			
	Date specimen sent to lab			
	Date specimen received by lab			
	Date specimen processed			
	Date results communicated to client			
	Result (Normal, ASCUS, ASC-H, LSIL, HSIL, Invasive Carcinoma, Inadequate, Inflammation)			
	Date results communicated to client			
	Date of expected rescreening *(according to national guidelines)*			
HPV Test				
	Purpose (screening, triage)			
	Specimen code			
	Specimen collection method (by client, by provider)			
	Specimen collection date			
	Date specimen sent to laboratory			
	Date specimen received by laboratory			
	Date specimen processed			
	Date results provided to screening site			
	Date results communicated to client			
	Result (negative, positive, retest required)			
	Date of expected rescreening *(according to national guidelines)*			
VIA				
	Purpose (screening, triage)			
	Acetic acid not applied. NOTE: *If acetic acid was not applied due to suspicion of cancer on speculum examination, screening should still be considered completed*			

Table continued

✓	DATA ELEMENT	COMMENT
	Result (negative, positive – eligible for cryotherapy, positive – not eligible for cryotherapy, positive – suspected cancer)	
	Date of expected rescreening *(according to national guidelines)*	
VILI		
	Purpose (screening, triage)	
	Lugol's not applied. NOTE: *If Lugol's was not applied due to suspicion of cancer on speculum examination, screening should still be considered completed*	
	Result (negative, positive – eligible for cryotherapy, positive – not eligible for cryotherapy, positive – suspected cancer)	
	Date of expected rescreening (*according to national guidelines*)	
Other clinical		
	Clinical diagnosis	
REFERRAL		
	Referred for triage	
	Referred for cryotherapy	
	Referred for large lesion not eligible for cryotherapy	
	Referred for suspected cancer	
	Referred for invasive cancer	
	Referred for other gynaecological issue	
	Referred for colposcopy	
	Date of referral and date of appointment	
TREATMENT AND MANAGEMENT		
Cold knife conisation (CKC)		
	CKC performed	
Colposcopy		
	Purpose (triage, large lesion referral, suspected cancer referral or diagnosis)	
	Colposcopy performed	
	Date colposcopy performed	
	Enhanced digital imaging done today	
	Colposcopy result (negative; positive; positive suspected invasive cancer)	
	Colposcopic impression	
	Biopsy performed	
	Date biopsy performed	
	Date biopsy specimen sent to lab	
	Endocervical curettage performed today	
	Date ECC performed	
	Date specimen sent to histology/pathology	
	Date histology/pathology result returned	
	Histology result/Pathology description	
	Colposcopy provider initials	
Cryotherapy		
	Cryotherapy performed at screening visit *(for Single Visit Approach)* *or* **Cryotherapy performed today**	
	Cryotherapy performed at triage visit	
	Cryotherapy postponed *or* **No treatment performed**	

Table continued

✓	DATA ELEMENT	COMMENT
	Previously postponed cryotherapy performed today	
	Referred-in cryotherapy performed	
	Date cryotherapy performed	
	Cryotherapy provider initials	
LEEP		
	Eligible for LEEP	
	LEEP performed onsite	
	LEEP performed at referral site	
	Date LEEP performed	
	LEEP provider initials	

DATA COLLECTION, AGGREGATION, AND REPORTING TOOLS

These tools are intended to support the development or improvement of data collection, aggregation and reporting tools for cervical cancer screening and the treatment of precancerous lesions. Each practice sheet is tailored to a screening and treatment strategy, and provides a set of indicators and corresponding example tools for collecting and collating patient data, and summarizing and reporting the services delivered. The list of strategy-specific indicators are adaptations of those in Tables 3.2 and 3.12-3.23. For details on indicator method of measurement, please refer to Tables 3.12-3.23 (in Implementation Tools and Materials).

The example client forms and registers illustrate the operational use of the general and strategy-specific core (and relevant optional) elements listed in the Data Elements Checklists – these examples, and the monthly and annual summary example forms, are not intended to be used without further development, stakeholder engagement, and testing within a specific country context.

The Abridged Data Dictionary and the Suggested DHIS2 Module supplement these resources with information targeted to enhancing electronic systems.

GENERAL NOTES ON ADAPTATION OF THE SAMPLE MONTHLY SUMMARY FORM

The monthly summary form may be adapted to include additional components in order to calculate optional indicators which have been included in the nationally standardized set of indicators. Additionally, space and guidance for indicator calculation can be included directly on the form to enable monitoring at the facility level, and to support data verification.

Adapting the form components for a particular country context may include:

- Adding explicit rows and sub-rows related to:
  - Number of clients screened positive for precancerous lesions.
  - Number of clients with a NEGATIVE screening result in order to cross check calculations. (Total screening should equal POSITIVE (including suspected cancer) screen + NEGATIVE screen.)
  - Number of VIA positive cryotherapy-eligible clients that chose to postpone cryotherapy.
- Adding or deleting sub-rows depending on screening methodologies used in the country. For example, if a country only offers VIA, all other screening methods can be removed from the form.
- Adding rows or sub-rows related to services provided at the facility:
  - Biopsy
  - Confirmed cancer
  - Other treatment methods (Cold Coagulation, surgery, chemotherapy, radiation)
- Modifying sub-row names for combined screening methodologies. For example, *VIA/VILI*, and *VIA/Cervicography (or Digital Photography)*.
- Modifying disaggregation columns by:
  - Adding detailed subdivision of Target Age Group (e.g. ages *<30*, *30–49* and *>50; finer disaggregation of age ranges; etc.*).
  - Using country-specific target age groupings.
- Removing HIV status disaggregate, where HIV prevalence is low and integration is not a programme priority

TOOLS FOR VIA-BASED SCREEN-AND-TREAT

PROGRAMME

This package of tools is applicable to a VIA-based screen and treat programme, using the Single-Visit Approach (i.e. screen with VIA and treat precancerous lesions in the same visit). The flowchart below illustrates the steps in this strategy for women with HIV-positive status or unknown HIV status in areas with high endemic HIV infection [*WHO Guidelines for screening and treatment of precancerous lesions for cervical cancer prevention,* 2013].

The example single-use/single-visit client form includes all minimum, and some additional, data elements to document VIA screening, cryotherapy or LEEP treatment, and basic referral elements. Programmes should determine whether all elements may be captured on one form, or whether each service should have its own data collection form – or how elements should be incorporated into forms for integrated programming. Additional forms for referral (e.g. for suspected cancer, or other gynecological problem) and referral feedback must also be created, based on the programme and health system context.

The example visit-based register includes data elements to document VIA screening, cryotherapy or LEEP treatment, and referrals. Because the register is visit-based, care must be taken to ensure de-duplication during tallying and data aggregation. If programmes wish to create longitudinal registers to aid in patient care, the registers should be organized by client name or national unique ID number, rather than by visit date; this shift also warrants consideration for replacing "tick one" options with entry of dates.

The example monthly summary form captures facility totals of individual services provided. These totals are tallied from the facility register, and are reported to the subnational level for aggregation (typically through an electronic HMIS) and indicator calculation, and monitoring across facilities – with feedback provided to facilities. Attention must be paid to avoid double-counting of services – particularly if screening and precancerous lesion treatment services are provided at separate locations. Though facility registers and systems may capture the full range of services and outcomes for each woman in order to support patient care and follow-up, services should only be counted and reported by the facility which provides them (unless otherwise determined by national policy). Aggregate data for the entire country/programme is accessed at the national level (through the HMIS or other reporting mechanism) for the monitoring of a limited set of indicators. The example annual summary form captures only the core indicators (with limited disaggregation) typically monitored at the national level, and Global indicators as an intermediate reporting tool where systems are nascent.

FIGURE 3.7

Flowchart for screen-and-treat strategy (HIV-positive status or unknown HIV status in areas with high endemic HIV infection): Screen with VIA and treat with cryotherapy, or LEEP when not eligible for cryotherapy

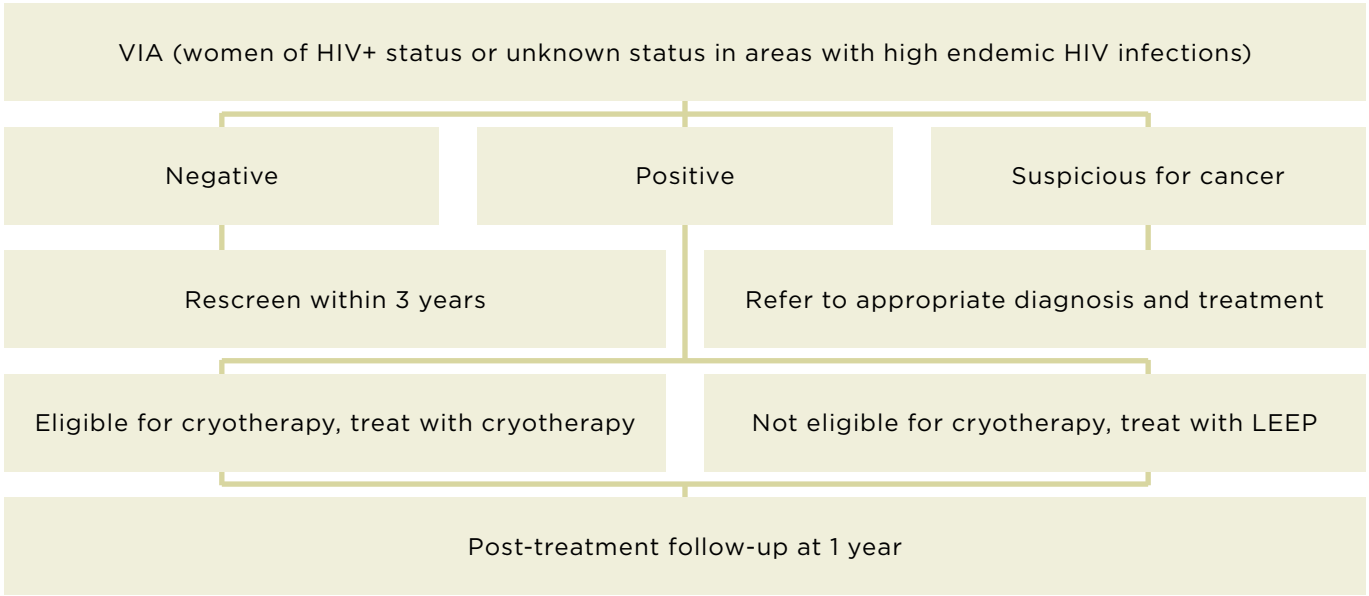


TABLE 3.24

List of global, core, and optional indicators for screen with VIA and treat with cryotherapy

INDICATOR G = GLOBAL; C = CORE; OPT = OPTIONAL	WHAT IT MEASURES
GLOBAL	
G1.0 Screening Rate	Percentage of women aged 30–49 years screened for the first time in a 12-month period
G2.0 Screening Test Positivity Rate	Percentage of VIA-positive women aged 30–49 years with a positive result in a 12-month period
G3.0 Treatment Rate	Percentage of VIA-positive women who have received treatment in a given time period
CORE	
C0.0 Number Screened	Number of women screened [by screening visit type and age group or range] in a given time period
C1.0 Screening Rate	Percentage of women *within the target age range* screened for the first time in a given time period
C2.0 Screening Test Positivity Rate	Percentage of [first time] screened women [within the target age range] with a positive screening test result in a given time period
C2.4 Suspected Cancer Cases	Percentage of [first time] screened women [within the target age range] with suspected cervical cancer
C3.0 Treatment Rate	Percentage of VIA-positive women who have received treatment in a given time period
C4.0 Proportion of Facilities Providing Services	Proportion of health facilities that are providing the cervical cancer services they are designated to provide
OPTIONAL	
OPT1.1 Screened Within Target Age Range	Proportion of total women screened for the first time who were *within the target age range*
OPT1.2 Progress Toward Target Screening Rate	Percentage of screening target reached in the last *year, quarter, month*
OPT1.3 Rescreened Within Target Interval	Percentage of women who were rescreened within the recommended screening interval
OPT1.4 Precancerous Lesion Post-treatment Follow-up	Percentage of women treated for precancerous lesions who return for a 1 year post-treatment follow-up screening test
OPT2.0.1 Precancerous Lesion Cure Rate	Percentage of women who received a negative screening result at their 1 year post-treatment follow-up
OPT3.1 Precancerous Lesion Treatment	Percentage of VIA-positive women with lesions eligible for cryotherapy or LEEP who received that treatment
OPT3.2 Post-treatment Complication	Percentage of women receiving cryotherapy or LEEP who returned with a post-treatment complication
OPT3.3 Treatment with Cryotherapy	Percentage of VIA-positive women with lesions eligible for cryotherapy who received cryotherapy
OPT3.3.1 Single Visit Approach Rate	Percentage of VIA-positive women with lesions eligible for cryotherapy treated during the same visit
OPT3.3.2 Postponed Cryotherapy	Percentage of VIA-positive women with lesions eligible for cryotherapy who postponed cryotherapy
OPT 3.3.3 Cryotherapy After Postponement	Percentage of VIA-positive women with lesions eligible for cryotherapy who received cryotherapy after postponing
OPT3.3.4 Did Not Return for Cryotherapy	Percentage of VIA-positive women with lesions eligible for cryotherapy who did not return for cryotherapy after postponing
OPT3.4 Treatment for Large Lesions	Percentage of VIA-positive women referred for large lesions who received LEEP

Table 3.24 continued

INDICATOR G = GLOBAL; C = CORE; OPT = OPTIONAL	WHAT IT MEASURES
OPT3.4.1 Large Lesion Treatment Eligibility	Percentage of VIA-positive women referred for large lesions who were eligible for LEEP
OPT3.4.2 Large Lesion Referral	Percentage of VIA-positive women referred for large lesions (lesions not eligible for cryotherapy)
OPT3.5 Suspected Cancer Treatment/Follow-up	Percentage of women with suspected invasive cancer who completed appropriate treatment or follow-up
OPT3.5.1 Suspected Cancer Referral Compliance	Percentage of VIA-positive women referred for suspected cancer who attended the referral visit
OPT3.5.2 Suspected Cancer Referral	Percentage of VIA-positive women referred for suspected cancer
OPT3.6 Colposcopy Referral Compliance	Percentage of VIA-positive women referred for colposcopy who attend the colposcopy visit
OPT3.6.1 Colposcopy Referral	Percentage of VIA-positive women referred for colposcopy
OPT3.7 Confirmed Cancer	Percentage of VIA-positive women referred for suspected cancer who were diagnosed with cancer
OPT4.1 Trained Service Providers	Proportion of service providers trained in screening and treatment services who are providing services
OPT4.2 Static Facility Screenings	Proportion of cervical cancer screenings conducted at a static facility
OPT4.2.1 Mobile Screenings	Proportion of cervical cancer screenings conducted through routine outreach using a mobile approach
OPT4.3 Community Campaigns	Number of community campaigns (including mass screening campaigns/periodic outreaches) carried out
OPT6.0 First Time Screening for Women with HIV	Percentage of women enrolled in HIV Care and Treatment who received their first cervical cancer screening
OPT6.1 PITC Service Provision	Percentage of women with previously unknown HIV status who received PITC and now know their status
OPT6.2 Linkage to HIV Services	Percentage of clients linked to HIV Care and Treatment after receiving an HIV positive result through PITC

VIA SCREENING AND CRYOTHERAPY/LEEP TREATMENT FORM

FACILITY AND VISIT INFORMATION

Facility name: _____ Client identification number: _____
Visit date: _____ Provider name: _____
Purpose of visit:
☐ Screening ☐ Treatment (Cryotherapy or LEEP) ☐ Post-treatment Complication (Cryotherapy or LEEP)

CLIENT INFORMATION

Client name: _____ Client identification number: _____
Phone: _____ Client age: _____ Date of Last Menstrual Period: _____
Physical address: _____

HIV Status

Last HIV Test Result: ☐ Positive ☐ Negative (< 3 months ago)
☐ Unknown *(Negative > 3 months ago, Inconclusive, or Never Tested)*

Client Screening History

Screened for cervical cancer in the past: ☐ Yes ☐ No ☐ Not Sure
If yes, screening was through: ☐ VIA ☐ Pap smear ☐ HPV Test ☐ Not Sure
Result of past screening: ☐ Positive ☐ Negative ☐ Results not received ☐ Not Sure
If positive, was treatment performed? ☐ Yes ☐ No ☐ Not Sure
Type of treatment performed? ☐ Cryotherapy ☐ LEEP ☐ Not Sure
When was the last screening? Date: _____ *Last treatment? Date:* _____

SCREENING

Screening **visit type:**
☐ First-time Screening ☐ Post-treatment Follow-up Screening (at 1 year)
☐ Rescreening (after last screening was negative)

VIA screening completed today?
☐ Yes (enter results below) ☐ No (list reason): _____

VIA Result
☐ Negative ☐ Positive
Eligible for cryotherapy? ☐ Yes ☐ No ☐ Positive, Suspected Cancer

Draw findings/lesion on cervix diagram above.

TREATMENT

For screening visit

☐ Cryotherapy performed at screening visit ☐ Cryotherapy postponed (reason): _____

For postponed/referred-in cryotherapy visit

☐ Previously postponed cryotherapy performed today ☐ Referred-in cryotherapy performed today
☐ No treatment performed (reason): _____
FOR LEEP/LARGE LESION REFERRAL VISIT
Eligible for LEEP: ☐ Yes ☐ No LEEP performed today: ☐ Yes ☐ No (reason): _____

REFERRAL

Referral to (name of site):
Reason for referral:
☐ Cryotherapy ☐ Large lesion (not eligible for cryotherapy) ☐ Suspected cancer ☐ Other Gynaecological Issue

NOTES/FOLLOW-UP

_____

CERVICAL CANCER SCREENING AND TREATMENT PROGRAM - VIA/CRYOTHERAPY/LEEP REGISTER

Facility name: _____ Month: _____ Year: _____

INTAKE														SCREENING			
No.	Visit Date	Purpose of Visit (tick applicable purpose)				Client Information								Screening Provider Initials	Screening Completed (tick one)		
		Screening	Treatment	Post-treatment complication		Client ID	Client Family Name	Client Given Name	Phone Number	Age	Last HIV Test Result (tick one)				First-time screening completed	1 year post-treatment follow-up screening completed	Rescreening completed
				Cryo	LEEP						Pos	Neg	Unk				
	A	B	C	D1	D2	E	F	G	H	I	J1	J2	J3	K	L	M	N
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
COLUMN TOTALS						Total Unique Clients				Total Within-in Age Range							
KEY TOTALS (for cross-check)			Total unique individuals seeking screening								Total Unknown Status				Total screened (L+M+N)		

SCREENING				REFERRAL				TREATMENT							
VIA Result (tick one)				Reason (tick one)				Cryotherapy (tick one)					LEEP (tick one)		
Nega-tive	Positive - eligi-ble for cryo	Positive - not eligible for cryo	Positive - Sus-pected Cancer	Re-ferred for large lesion	Re-ferred for sus-pected cancer	Re-ferred for cryo	Re-ferred for other gyneco-logical issue	Cryo per-formed at screen-ing visit	Cryo post-poned	Post-poned cryo per-formed today	Re-ferred-in cryo per-formed today	Cryo Provider Initials	Eligible for LEEP	LEEP Per-formed	LEEP Pro-vider Initials
O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD
Total positive (P+Q+R)				Total referrals (S+T+U+V)				Total cryotherapy procedures (W+Y+Z)							

MONTHLY SUMMARY FORM FOR VIA SCREENING PROGRAMME

Facility Name:
Subnational Unit:
Month:
Year:

Services provided at facility:
☐ VIA
☐ Cryotherapy
☐ LEEP

INDICATOR COMPONENT	DISAGGREGATION		HIV+		HIV -		HIV Unknown		Totals
			IN Target Age Group	OUT of Target Age Group	IN Target Age Group	OUT of Target Age Group	IN Target Age Group	OUT of Target Age Group	
Number of clients who received a CERVICAL CANCER SCREENING	First time screening								
	1 year Post-treatment Follow-Up								
	Rescreening (previous negative result)								
	TOTAL								
Number of clients with POSITIVE screening result	First time screening	Eligible for Cryotherapy							
		Not Eligible for Cryotherapy							
		Suspected Cancer							
	1 year Post-treatment Follow-Up Screening	Eligible for Cryotherapy							
		Not Eligible for Cryotherapy							
		Suspected Cancer							
	Rescreening (previous negative result)	Eligible for Cryotherapy							
		Not Eligible for Cryotherapy							
		Suspected Cancer							
	TOTAL								
Number of clients TREATED WITH CRYOTHERAPY	First time screening	*Treated at screening visit*							
		Treated after postponing							
	1 year Post-treatment Follow-Up Screening	*Treated at screening visit*							
		Treated after postponing							
	Rescreening (previous negative result)	*Treated at screening visit*							
		Treated after postponing							
	Referred-in from other site/service								
	TOTAL								
Number of clients with LARGE LESIONS (not eligible for cryotherapy)	Treated with LEEP on-site								
	Referred for treatment								
	TOTAL								
Number of clients with a POST-TREATMENT COMPLICATION	Cryotherapy								
	LEEP								
	TOTAL								

ANNUAL SUMMARY FORM FOR VIA PROGRAMME

Facility Name:
Subnational Unit:
Month:
Year:

Services provided at facility:
☐ VIA
☐ Cryotherapy
☐ LEEP
☐ Cancer Diagnostics and Treatment

Indicator Component		**Number**
A	Number of women AGED 30–49 YEARS in the population	
B	Number of women screened	
B1	Number of screened women AGED 30–49 YEARS	
B2	Number of women screened for the FIRST TIME	
B3	Number of women AGED 30–49 YEARS who were screened for the FIRST TIME	
C	Number of women with a POSITIVE screening result (INCLUDES suspected cancer)	
C1	Number of women AGED 30–49 YEARS with a POSITIVE screening result (INCLUDES suspected cancer)	
C2	Number of women AGED 30–49 YEARS who were screened for the FIRST TIME and received a POSITIVE screening result (INCLUDES suspected cancer)	
D	Number of women who received TREATMENT for PRECANCEROUS LESIONS (e.g. Cryotherapy or LEEP)	
D1	Number of women AGED 30–49 YEARS who received TREATMENT for PRECANCEROUS LESIONS (e.g. Cryotherapy or LEEP)	
E	Number of women with SUSPECTED CANCER at screening	
E1	Number of women AGED 30–49 YEARS screened for the FIRST TIME with SUSPECTED CANCER at screening	
F	Number of women who received TREATMENT FOR INVASIVE CERVICAL CANCER	
F1	Number of women AGED 30–49 YEARS who received TREATMENT FOR INVASIVE CERVICAL CANCER	

Indicators	**Percent (or #)**
C0.0 Number of Women Screened (Total): B	
Number of Women Screened (For the First Time): B1	
Number of Women Screened (For the First Time Within Target Age Range): B3	
G1.0 and **C1.0** Screening Rate: B3 / A x 100	%
G2.0 Screening Test Positivity Rate: C1 / B1 x 100	%
C2.0 Screening Test Positivity Rate (Overall): C / B x 100	%
Screening Test Positivity Rate (Women Screened for the First Time Within the Target Age Range): C2 / B3 x 100	%
C2.4 Suspected Cancer Cases (Overall): E / B x 100	%
Suspected Cancer Cases (Women Screened for the First Time Aged 30–49 years): E1 / B1 x 100	%
G3.0 Treatment Rate: D1 + F1 / C x 100	%
C3.0 Treatment Rate: D + F / C x 100	%

TOOLS FOR HPV TEST, FOLLOWED BY VIA TRIAGE AND TREATMENT

This package of tools is applicable to a screen-triage-treat programme, using HPV testing as the primary screening test followed by VIA to determine whether or not treatment is offered, as well as cryotherapy eligibility. The flowchart below illustrates the steps in this strategy for women with HIV-positive status or unknown HIV status in areas with high endemic HIV infection [*WHO Guidelines for screening and treatment of precancerous lesions for cervical cancer prevention*, 2013].

The example client form includes all minimum, and some additional, data elements to document HPV test-based screening, VIA screening, triage with VIA, cryotherapy or LEEP treatment, and basic referral elements. This form is intended to be printed on carbon copy paper to support patient care and documentation across multiple visits and sites. If the form will be used as a single-use/single-visit form, certain elements (e.g. facility name, visit date, provider initials) may be consolidated and reorganized for simplicity (see the Minimum Data Elements Checklist for Client Level Data Collection). Programmes should determine whether all elements may be captured on one form, or whether each service should have its own data collection form – and if applicable, how elements should be incorporated into forms for integrated programming. Additional forms to accompany the HPV specimen and results to and from the laboratory, as well as forms for referral and referral feedback, must also be created based on the programme and health system context.

The example client-based register includes data elements to document screening with HPV test, screening with VIA, triage with VIA, treatment with cryotherapy or LEEP, referrals, and referral feedback (to support patient management by providers). Programmes should determine whether combined or separate forms and registers should be used for each service. Care must be taken to ensure identification of unique patients and de-duplication during tallying and data aggregation. Attention must also be paid to avoid double-counting of services – particularly if screening and precancerous lesion treatment services are provided at separate locations. Though longitudinal client-based facility registers and systems may capture the full range of services and outcomes for each woman in order to support patient care and follow-up, services should only be reported to the central level by the point of service delivery (unless otherwise determined by national data management or M&E policy).

The example monthly summary form captures facility totals of individual services provided. These totals are tallied from the facility register, and are reported to the subnational level for aggregation (typically through an electronic HMIS) and monitoring across facilities – with feedback provided to facilities. Aggregate data for the entire country/programme is accessed at the national level (through the HMIS or other reporting mechanism) for the monitoring of a limited set of indicators. The example annual summary form captures only the core indicators (with limited disaggregation) typically monitored at the national level, and Global indicators as an intermediate reporting tool where systems are nascent. This example form presents an additional complexity through the presumption that the WHO target age range for screening does not align with the national target age range.

For reference by programmes transitioning from a strategy of VIA alone to HPV Testing Followed by VIA triage, data elements to differentiate between use of VIA as primary screening and VIA as triage have been included in the sample forms. Programmes using a strategy of HPV Testing Alone may adapt the sample forms by removing the VIA triage elements and indicator components or may adapt the VIA elements to capture VAT (see section on *Additional consideration for VIA Purpose – visual assessment for treatment [VAT]*). Programmes using cytology as a secondary screening or triage test may adapt these sample forms by replacing the VIA elements with those relevant to cytology (see the Data Elements Checklists). Colposcopy data elements may also be added as appropriate.

FIGURE 3.8

Flowchart for screen-and-treat strategy (HIV-positive status or unknown HIV status in areas with high endemic HIV infection): Screen with an HPV test followed by VIA and treat with cryotherapy, or LEEP when not eligible for cryotherapy.

When an HPV test is positive, then VIA is provided as a second screening test to determine whether or not treatment is offered. Treatment is only provided if both the HPV test and VIA are positive.

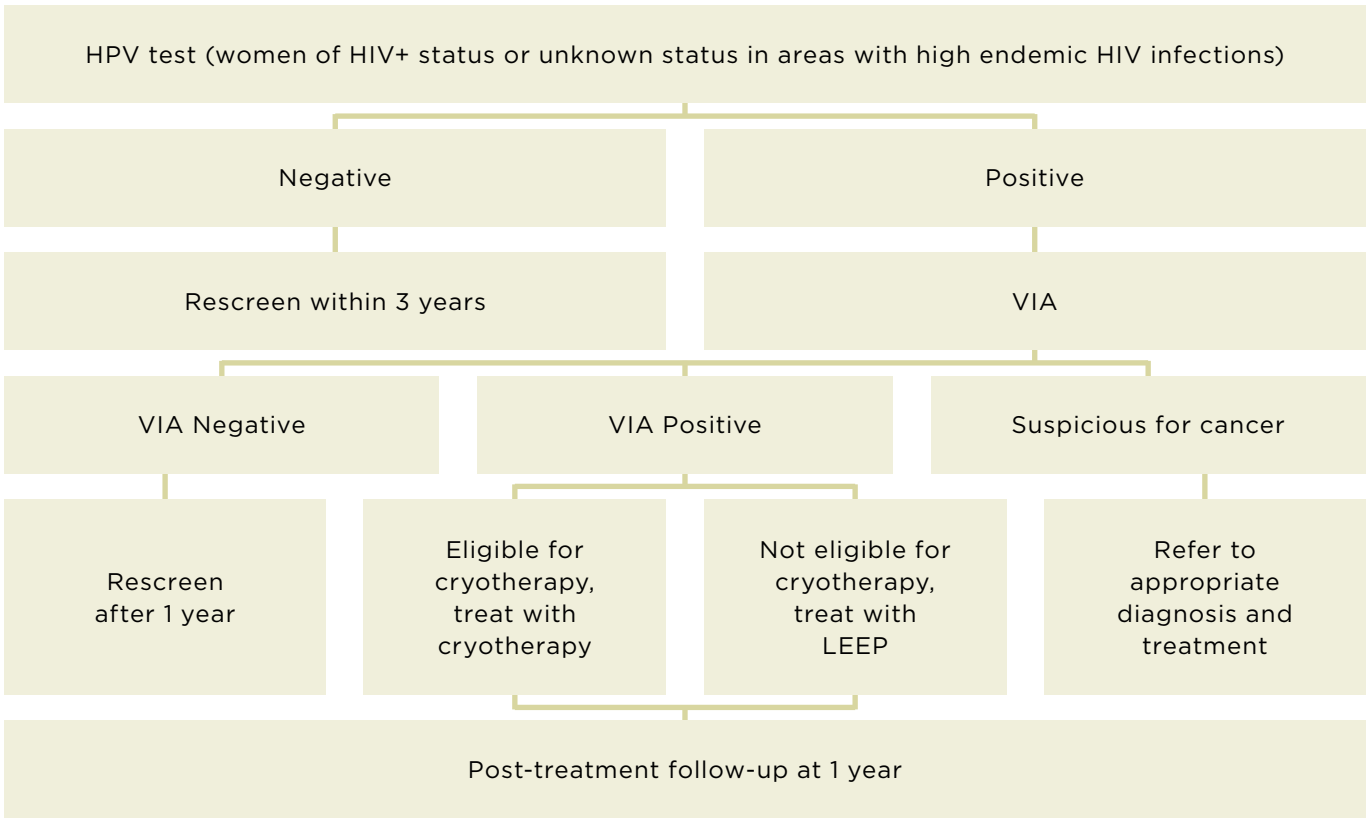


TABLE 3.25

List of global, core, and optional indicators for screen with HPV test followed by VIA and treat with cryotherapy

INDICATOR (G=GLOBAL; C=CORE; OPT=OPTIONAL)	WHAT IT MEASURES
GLOBAL	
G1.0 Screening Rate	Percentage of women aged 30–49 years screened for the first time in a 12-month period
G2.0 Screening Test Positivity Rate	Percentage of HPV or VIA screen-positive women aged 30–49 years with a positive result in a 12-month period
G3.0 Treatment Rate	Percentage of VIA screen-positive and VIA triage-positive women who have received treatment in a given time period
CORE	
C0.0 Number Screened	Number of women screened [by screening visit type and age group or range] in a given time period
C1.0 Screening Rate	Percentage of women within *the target age range* screened for the first time in a given time period
C2.0 Screening Test Positivity Rate	Percentage of [first time] screened women [within the target age range] with a positive HPV or VIA screening test result in a given time period
C2.1 Received Triage Examination	Percentage of HPV screen-positive women who received a VIA triage examination
C2.2 Triage Examination Positivity Rate	Percentage of women who received VIA triage and had a positive test result in a given time period

Table 3.25 continued

INDICATOR (G=GLOBAL; C=CORE; OPT=OPTIONAL)	WHAT IT MEASURES
C2.4 Suspected Cancer Cases	Percentage of [first time] screened women [within the target age range] with suspected cervical cancer
C3.0 Treatment Rate	Percentage of VIA screen-positive and VIA triage-positive women (i.e. all women identified as requiring treatment) who have received treatment in a given time period
C4.0 Proportion of Facilities Providing Services	Proportion of health facilities that are providing the cervical cancer services they are designated to provide
OPTIONAL	
OPT1.0.1 Screening Test Failure	Percentage of women whose sample was tested with an HPV screening test more than once due to error
OPT1.0.2 Inadequate Sample	Percentage of women whose sample was inadequate for HPV screening test completion
OPT1.0.3 Received Results	Percentage of women who received HPV screening test results
OPT1.1 Screened Within Target Age Range	Proportion of total women screened (HPV Test or VIA) for the first time who were within the target age range
OPT1.2 Progress Toward Target Screening Rate	Percentage of screening target reached in the last *year, quarter, month*
OPT1.3 Rescreened Within Target Interval	Percentage of women who were rescreened within the recommended screening interval
OPT1.4 Precancerous Lesion Post-treatment Follow-up	Percentage of women treated for precancerous lesions who return for a 1 year post-treatment follow-up screening test
OPT2.0.1 Precancerous Lesion Cure Rate	Percentage of women who received a negative screening result at their 1 year post-treatment follow-up
OPT2.2.1 Triage Examination Provision	Percentage of HPV screen-positive women who attended a VIA triage visit and received VIA
OPT2.2.2 Triage Referral Compliance	Percentage of HPV screen-positive women referred for triage who attended the VIA triage visit
OPT2.2.3 Referred for Triage	Percentage of HPV screen-positive women who were referred for VIA triage
OPT2.3 Screened Women Requiring Treatment	Percentage of women screened [for the first time] with an HPV test who received a positive VIA triage examination result in a given time period
OPT3.1 Precancerous Lesion Treatment	Percentage of VIA screen-positive and VIA triage-positive women with lesions eligible for cryotherapy or LEEP who received that treatment
OPT3.2 Post-treatment Complication	Percentage of women receiving cryotherapy or LEEP who returned with a post-treatment complication
OPT3.3 Treatment with Cryotherapy	Percentage of VIA screen-positive and VIA triage-positive women with lesions eligible for cryotherapy who received cryotherapy
OPT3.3.1 Single Visit Approach Rate	Percentage of VIA screen-positive and VIA triage-positive women with lesions eligible for cryotherapy treated during the same visit
OPT3.3.2 Postponed Cryotherapy	Percentage of VIA screen-positive and VIA triage-positive women with lesions eligible for cryotherapy who postponed cryotherapy
OPT 3.3.3 Cryotherapy After Postponement	Percentage of VIA screen-positive and VIA triage-positive women with lesions eligible for cryotherapy who received cryotherapy after postponing
OPT3.3.4 Did Not Return for Cryotherapy	Percentage of VIA screen-positive and VIA triage-positive women with lesions eligible for cryotherapy who did not return for cryotherapy after postponing
OPT3.4 Treatment for Large Lesions	Percentage of VIA screen-positive and VIA triage-positive women referred for large lesions who received LEEP
OPT3.4.1 Large Lesion Treatment Eligibility	Percentage of VIA screen-positive and VIA triage-positive women referred for large lesions who were eligible for LEEP
OPT3.4.2 Large Lesion Referral	Percentage of VIA screen-positive and VIA triage-positive women referred for large lesions (lesions not eligible for cryotherapy)

Table 3.25 continued

INDICATOR (G=GLOBAL; C=CORE; OPT=OPTIONAL)	WHAT IT MEASURES
OPT3.5 Suspected Cancer Treatment/Follow-up	Percentage of VIA screen-positive and VIA triage-positive women with suspected invasive cancer who completed appropriate treatment or follow-up
OPT3.5.1 Suspected Cancer Referral Compliance	Percentage of VIA screen-positive and VIA triage-positive women referred for suspected cancer who attended the referral visit
OPT3.5.2 Suspected Cancer Referral	Percentage of VIA screen-positive and VIA triage-positive women referred for suspected cancer
OPT3.6 Colposcopy Referral Compliance	Percentage of VIA screen-positive and VIA triage-positive women referred for colposcopy who attend the colposcopy visit
OPT3.6.1 Colposcopy Referral	Percentage of VIA screen-positive and VIA triage-positive women referred for colposcopy
OPT3.7 Confirmed Cancer	Percentage of HPV Test or VIA screen-positive women diagnosed with cancer
OPT4.1 Trained Service Providers	Proportion of service providers trained in screening and treatment services who are providing services
OPT4.2 Static Facility Screenings	Proportion of cervical cancer screenings conducted at a static facility
OPT4.2.1 Mobile Screenings	Proportion of cervical cancer screenings conducted through routine outreach using a mobile approach
OPT4.3 Community Campaigns	Number of community campaigns (including mass screening campaigns/periodic outreaches) carried out
OPT4.4 Self-sampling	Proportion of HPV screening tests conducted using a self-collected sample
OPT5.0 Results Turn-around Time	Number of days between HPV sample collection and return of HPV test results to screened women
OPT5.0.1 Sample Submission Time	Number of days between HPV sample collection and transport of sample to laboratory
OPT5.0.2 Laboratory Processing Time	Number of days between laboratory receipt of HPV sample and return of results to facility
OPT5.0.3 Results Communication Turn-around Time	Number of days between facility receipt of HPV test results and return of results to screened women
OPT6.0 First Time Screening for Women with HIV	Percentage of women enrolled in HIV Care and Treatment who were screened for cervical cancer for the first time
OPT6.1 PITC Service Provision	Percentage of women with previously unknown HIV status who received PITC and now know their status
OPT6.2 Linkage to HIV Services	Percentage of clients linked to HIV Care and Treatment after receiving an HIV positive result through PITC

HPV SCREENING, VIA TRIAGE AND CRYOTHERAPY/LEEP TREATMENT FORM

CLIENT INFORMATION

Client name: _____ Client identification number: _____
Client age: _____ Date of Last Menstrual Period: _____ Phone 1: _____ Phone 2: _____
Physical address: _____

HIV Status

Last HIV Test Result:
☐ Positive ☐ Negative (< 3 months ago) ☐ Unknown *(Negative > 3 months ago, Inconclusive, or Never Tested)*

Client Screening History

Screened for cervical cancer in the past:	☐ Yes	☐ No	☐ Not Sure	
If yes, screening was through:	☐ VIA	☐ Pap smear	☐ HPV Test	☐ Not Sure
Result of past screening:	☐ Positive	☐ Negative	☐ Results not received	☐ Not Sure
If positive, was treatment performed?	☐ Yes	☐ No	☐ Not Sure	
Type of treatment performed?	☐ Cryotherapy	☐ LEEP	☐ Not Sure	

Is today's visit due to post-treatment complication? ☐ Yes ☐ No
When was the last screening? *Date*: _____
Last treatment? *Date*: _____

SCREENING AND TRIAGE

HPV Test

Facility name: _____ District: _____ Provider name: _____
☐ First-time Screening
☐ Post-treatment Follow-up Screening at 1 year
☐ Rescreening (after last screening was negative)
Specimen collection method: ☐ By client ☐ By provider *or* ☐ Specimen not collected (reason): _____
Specimen collection date: _____ Visit date: _____ *or* ☐ Same as collection date
Specimen code: _____ Date sent to lab: _____
Date rec'd by lab: _____ Date tested: _____ HPV kit #: _____
Results provided to client: _____ ☐ Yes (date provided): _____ ☐ No (reason): _____

HPV Test Result:

☐ Negative ☐ Positive ☐ Retest required
Date of facility report: _____
Technician initials: _____

VIA

Facility name: _____ District: _____
Provider name: _____ ☐ Triage *or* ☐ First-time screening
☐ Post-treatment Follow-up Screening at 1 year
☐ Rescreening (after last screening was negative)
Screening completed?
☐ Yes (visit date):_____ ☐ No (list reason): _____

VIA Result:

☐ Negative ☐ Positive
Eligible for cryotherapy? ☐ Yes ☐ No ☐ Positive, Suspected Cancer
☐ Acetic acid not applied (list reason): _____
Draw findings/lesion on cervix diagram above.

TREATMENT

For VIA screening or triage visit

Cryotherapy performed at:

☐ Screening visit ☐ Triage visit *or* ☐ Cryotherapy postponed (reason): _____

For postponed/referred-in cryotherapy visit

Facility name: _____ Visit date: _____ Provider initials: _____

☐ Previously postponed cryotherapy performed today

☐ Referred-in cryotherapy performed today ☐ No treatment performed (reason): _____

For leep/large lesion referral visit

Facility name: _____ Visit date: _____ Provider initials: _____

Eligible for LEEP: ☐ Yes ☐ No

LEEP performed today: ☐ Yes ☐ No (reason): _____

REFERRAL AND FOLLOW-UP

Referral to (name of site/s): _____

Reason for referral and date referred: _____

☐ Triage (date): _____ ☐ Cryotherapy (date): _____ ☐ Large lesion (ineligible for cryotherapy) Date: _____

☐ Suspected cancer (date): _____ ☐ Other Gynaecological Issue (date): _____ ☐ Invasive cancer (date):

Date of appt at referral site: _____

Completed after screening, triage, or treatment:

Next screening visit in: ☐ 1 year ☐ 3 years ☐ 5 years

NOTES/FOLLOW-UP

_____

CERVICAL CANCER SCREENING AND TREATMENT PROGRAM - HPV/VIA/CRYOTHERAPY/LEEP REGISTER

Facility name: _____ Month: _____ Year: _____

INTAKE										
No.	Client Information								Visit due to post-treatment complication (enter date below)	
	Client Family Name	Client Given Name	Client ID	Phone Number	Age	Last HIV Test Result (tick one)				
						Pos	Neg	Unk	Cryo	LEEP
	A	B	C	D	E	F1	F2	F3	G1	G2
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
COLUMN TOTALS										

SCREENING AND TRIAGE																	
Screening Visit Type and Date (enter date below)			Type of Screening Test Used (tick one)		HPV Test												
First-time screening completed	1 yr post-treatment screening completed	Re-screening completed	HPV Test	VIA	HPV Test Provider Initials	Specimen code	Collection Method (tick one)		Date specimen collected	Date specimen sent to lab	Date specimen received by lab	Date specimen processed	Date results reported to facility	Date results provided to client	Result (tick one)		
							Self	Provider							Negative	Positive	Rest-est Required
H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y

CERVICAL CANCER SCREENING AND TREATMENT PROGRAM - HPV/VIA/CRYOTHERAPY/LEEP REGISTER

Facility name: _____ Month: _____ Year: _____

SCREENING AND TRIAGE						REFERRAL					
VIA Test						Reason and Date of Referral (enter date below)					
VIA Provider Initials	IF VIA IS TRIAGE Date VIA triage performed	Result (tick one)				Referred to other site for cryo	Referred for large lesion	Referred for suspected cancer	Referred for other gynecological issue	Referred for triage	Referred for colposcopy
		Negative	Positive - eligible for cryo	Positive - not eligible for cryo	Positive - Suspected Cancer						
Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK

TREATMENT								REFERRAL FEEDBACK - DO NOT TALLY					
Cryotherapy				Cryo Provider Initials	LEEP		LEEP Provider Initials	Cryo performed at different site (enter date)	LEEP performed at different site (enter date)	Colposcopy			
Cryo performed at triage visit (Y or N)	Cryo postponed (Y or N)	Postponed cryo performed today (enter date)	Referred-in cryo performed today (enter date)		Confirmed eligible for LEEP (Y or N)	LEEP performed onsite (enter date)				Colposcopy performed at different site (enter date)	Colposcopy result (tick one)		
											Negative	Positive for pre-cancer	Positive for cancer
AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY

MONTHLY SUMMARY FORM FOR HPV SCREENING/VIA TRIAGE AND VIA SCREENING PROGRAMME

Facility Name:
Subnational Unit:
Month:
Year:
Services provided at facility

- ☐ VIA
- ☐ HPV Test
- ☐ Cryotherapy
- ☐ LEEP
- ☐ Cancer Diagnostics and Treatment

Indicator Component	DISAGGREGATION		HIV+		HIV -		HIV Unknown		TOTALS
			IN Target Age Group	OUT of Target Age Group	IN Target Age Group	OUT of Target Age Group	IN Target Age Group	OUT of Target Age Group	
Number of clients who received a cervical cancer **SCREENING** with **HPV TEST**	First time screening								A
	1 year Post-treatment Follow-Up								B
	Rescreening (previous negative result)								C
	TOTAL SCREENED WITH HPV TEST								D
Number of clients who received a cervical cancer **SCREENING** with **VIA**	First time screening								E
	1 year Post-treatment Follow-Up								F
	Rescreening (previous negative result)								G
	TOTAL SCREENED WITH VIA								H
TOTAL screened for FIRST TIME (A + E)									I
TOTAL screened 1 YR POST-TREATMENT (B + F)									J
TOTAL RESCREENED (C + G)									K
TOTAL WOMEN SCREENED (I + J + K) OR (D + H)									L
Number of clients with a **POSITIVE HPV SCREENING TEST** result	First time screening								M
	1 year Post-treatment Follow-Up								N
	Rescreening (previous negative result)								O
	TOTAL POSITIVE HPV SCREENING								P
Number of clients with **POSITIVE VIA SCREENING** result	First time screening	Eligible for Cryo							Q
		Not Eligible for Cryo							R
		Suspected Cancer							S
	1 year Post-treatment Follow-Up Screening	Eligible for Cryo							T
		Not Eligible for Cryo							U
		Suspected Cancer							V
	Rescreening (previous negative result)	Eligible for Cryo							W
		Not Eligible for Cryo							X
		Suspected Cancer							Y
	TOTAL POSITIVE VIA SCREENING								Z
POSITIVE screening result: First time screening (M+Q+R+S)									AA
POSITIVE screening result: 1yr post-treatment (N+T+U+V)									AB
POSITIVE screening result: Rescreened (O+W+X+Y)									AC
TOTAL SCREEN-POSITIVE WOMEN (AA + AB + AC) OR (P + Z)									AD
Number of clients with **POSITIVE VIA TRIAGE** result	First time screening	Eligible for Cryo							AE
		Not Eligible for Cryo							AF
		Suspected Cancer							AG
	1 year Post-treatment Follow-Up Screening	Eligible for Cryo							AH
		Not Eligible for Cryo							AI
		Suspected Cancer							AJ
	Rescreening (previous negative result)	Eligible for Cryo							AK
		Not Eligible for Cryo							AL
		Suspected Cancer							AM
	TOTAL POSITIVE VIA TRIAGE								AN

Indicator Component	DISAGGREGATION		HIV+		HIV -		HIV Unknown		TOTALS
			IN Target Age Group	OUT of Target Age Group	IN Target Age Group	OUT of Target Age Group	IN Target Age Group	OUT of Target Age Group	
ELIGIBLE FOR CRYO: First-time screening (Q + AE)									AO
ELIGIBLE FOR CRYO: 1yr post-treatment screen (T + AH)									AP
ELIGIBLE FOR CRYO: Rescreened (W + AK)									AQ
TOTAL ELIGIBLE FOR CRYO (AO + AP + AQ)									AR
NOT ELIGIBLE FOR CRYO: First-time screening (R + AF)									AS
NOT ELIGIBLE FOR CRYO: 1yr post-treatment screen (U + AI)									AT
NOT ELIGIBLE FOR CRYO: Rescreened (X + AL)									AU
TOTAL NOT ELIGIBLE FOR CRYO (AS + AT + AU)									AV
SUSPECTED CANCER: First-time screening (S + AG)									AW
SUSPECTED CANCER: 1yr post-treatment screen (V + AJ)									AX
SUSPECTED CANCER: Rescreened (Y + AM)									AY
TOTAL SUSPECTED CANCER (AW + AX + AY)									AZ
TOTAL WOMEN NEEDING CRYOTHERAPY OR LEEP TREATMENT (AR + AV)									BA
TOTAL WOMEN NEEDING TREATMENT (AR + AV + AZ)									BA
Number of clients TREATED WITH CRYO-THERAPY	First time screening	Treated at VIA visit (screening or triage)							BB
		Treated after post-poning							BC
	1 year Post-treat-ment Follow-Up Screening	Treated at VIA visit (screening or triage)							BD
		Treated after post-poning							BE
	Rescreening (previous nega-tive result)	Treated at VIA visit (screening or triage)							BF
		Treated after post-poning							BG
	TOTAL								BH
Number of clients with LARGE LESIONS (not eligible for cryo)	First time screening	Treated with LEEP on-site							BI
		Referred for treat-ment							BJ
	1 year Post-treat-ment Follow-Up Screening	Treated with LEEP on-site							BK
		Referred for treat-ment							BL
	Rescreening (previous nega-tive result)	Treated with LEEP on-site							BM
		Referred for treat-ment							BN
	TOTAL								BO
TREATED WITH CRYO/LEEP: First time screening (BB + BC +BI)									BP
TREATED WITH CRYO/LEEP: 1yr post-treatment screen (BD + BE + BK)									BQ
TREATED WITH CRYO/LEEP: Rescreen (BF + BG + BM)									BR
TOTAL TREATED WITH CRYO OR LEEP (BP + BQ + BR)									BS
Number of clients with a POST-TREAT-MENT COM-PLICATION	Cryotherapy								BT
	LEEP								BU
	TOTAL								BV

ANNUAL SUMMARY FORM FOR HPV SCREENING/VIA TRIAGE AND VIA SCREENING PROGRAMME

Facility/Subnational Unit:
Month:
Year:
Services provided at facility

- ☐ VIA
- ☐ HPV Test
- ☐ Cryotherapy
- ☐ LEEP
- ☐ Cancer Diagnostics and Treatment

Indicator Component		Number
A	Number of women AGED 30–49 YEARS in the population	
B	Number of women screened	
b_1	Number of women screened *with HPV Test*	
b_2	Number of women screened *with VIA*	
B1	Number of women AGED 30–49 YEARS screened (aged 30–49 years screened with *HPV Test* + aged 30–49 years screened with *VIA*)	
B2	Number of women screened for the FIRST TIME (First time screens *HPV Test* + First time screens *VIA*)	
B3	Number of women AGED 30–49 YEARS who were screened for the FIRST TIME	
$b_{3.1}$	Number of women AGED 30–49 YEARS screened for the FIRST TIME (*HPV Test*)	
$b_{3.2}$	Number of women AGED 30–49 YEARS screened for the FIRST TIME (*VIA*)	
C	Number of women with a POSITIVE screening test result (INCLUDES suspected cancer)	
c_1	Number of women with a POSITIVE HPV screening test result	
c_2	Number of women with a POSITIVE VIA screening test result (INCLUDES suspected cancer)	
C1	Number of women AGED 30–49 YEARS with a POSITIVE screening result (INCLUDES suspected cancer)	
C2	Number of women AGED 30–49 YEARS who were screened for the FIRST TIME and had a POSITIVE screening result (INCLUDES suspected cancer)	
$c_{2.1}$	Number of women AGED 30–49 YEARS who were screened for the FIRST TIME and had a POSITIVE HPV screening test result	
$c_{2.2}$	Number of women AGED 30–49 YEARS who were screened for the FIRST TIME and had with a POSITIVE VIA screening test result (INCLUDES suspected cancer)	
D	Number of women who received a VIA TRIAGE examination	
E	Number of women with a POSITIVE VIA TRIAGE examination result	
F	Number of screened women who received TREATMENT for PRECANCEROUS LESIONS (e.g. Cryotherapy or LEEP)	
F1	Number of screened women AGED 30–49 YEARS who received TREATMENT for PRECANCEROUS LESIONS (e.g. Cryotherapy or LEEP)	
G	Number of women with SUSPECTED CERVICAL CANCER	
G1	Number of women AGED 30–49 YEARS screened for the FIRST TIME with SUSPECTED CERVICAL CANCER	
H	Number of women who received TREATMENT for INVASIVE CERVICAL CANCER	
H1	Number of women AGED 30–49 YEARS who received TREATMENT for INVASIVE CERVICAL CANCER	
Core and Global Indicators		Percent (or #)
C0.0 Number of Women Screened (TOTAL): (*sum of* $b_1 + b_2$)		
Number of Women Screened (FIRST TIME): B2		
Number of Women Screened (FIRST TIME, WITHIN TARGET AGE RANGE): B3 (*sum of* $b_{3.1} + b_{3.2}$)		
G1.0 and **C1.0** Screening Rate: B3 / A x 100		%
G2.0 Screening Test Positivity Rate: C1 / B1 x 100		%
C2.0 Screening Test Positivity Rate (OVERALL – *all screening methods*): C / B x 100		%
Screening Test Positivity Rate (OVERALL – *HPV Test*): c_1 / b_1 x 100		%
Screening Test Positivity Rate (FIRST TIME, WITHIN TARGET AGE RANGE – *HPV Test*): $c_{2.1}$ / $b_{3.1}$ x 100		%

Table continued

Indicator Component	Number
Screening Test Positivity Rate (OVERALL – *VIA Test*): c_2 / b_2 x 100	%
Screening Test Positivity Rate (FIRST TIME, WITHIN TARGET AGE RANGE – *VIA*): $c_{2.2}$ / $b_{3.2}$ x 100	%
C2.1 Received Triage Examination: D / b_1 x 100	%
C2.2 Triage Examination Positivity Rate: E / D x 100	%
C2.4 Suspected Cancer Cases (OVERALL): G / B x 100	%
Suspected Cancer Cases (FIRST TIME, WITHIN TARGET AGE RANGE– *all screening methods*): G1 / B3 x 100	%
G3.0 Treatment Rate: F1 + H1 / C x 100	%
C3.0 Treatment Rate: F + H / c_2 + E x 100	%

ABRIDGED DATA DICTIONARY FOR VIA PROGRAMME

NAME	DEFINITION	DATA TYPE (POSSIBLE VALUES)	MAPPING CF = Client Form REG = Register SUM = Summary Form IND = Indicator
FACILITY AND CLIENT INTAKE DATA			
Facility name	Full standardized name of the facility	**Text** *or drop-down*	**CF to REG to SUM**
Facility code	Standardized numeric or alpha-numeric code for the facility assigned at the national or subnational level	COUNTRY DEPENDENT	CF to REG to SUM
District	Official district (or equivalent) name	**Text** *or drop-down*	**CF to REG to SUM**
Visit date	Day, Month, and Year of the client visit	**Date**	**CF to REG to SUM**
Purpose of visit	Element to orient form and register completion. Can also be used (in conjunction with unique identifier) to monitor clients accessing services.	Categorical Response (SCREENING, TREATMENT, POST-VISIT COMPLICATION)	CF to REG
Provider name	Given Names and Surnames of screening provider	**Text**	**CF to REG to SUM**
Client name	Given Names and Surnames of client Note: for an electronic client record, Given Names and Surnames should be captured in separate fields to avoid inconsistencies (also applicable to paper-based forms/registers)	**Text**	**CF to REG**
Client identification number	National identification number or other unique client identifier used by the facility, programme, or country	**COUNTRY DEPENDENT**	**CF to REG**
Phone	Primary contact information for client collected for follow-up purposes	**Numeric**	**CF to REG**
Client next of kin phone number	Alternate client contact information for the purpose of follow-up	Numeric	CF
Client age	Age of client in years Identifies clients as inside or outside of the WHO recommended screening target age range of years; If country target age range is different, age can be used to disaggregate total results in order to calculate both Global and National indicators	**Numeric or Calculated*** **see Date of birth*	**CF to REG; Tally from REG to SUM; IND**
Client birth date	Day, Month, and Year of client birth Note: Depending on country context date of birth, age, or both should be captured. In client level electronic systems, date of birth alone can be captured as this will allow for an automated, accurate calculation of age.	Date	CF to REG; Tally from REG to SUM; IND
Date of last menstrual period	Self-reported [by client] Day, Month, and Year of client's last menstrual period. Used to determine possible pregnancy/need for pregnancy test, as well as other potential abnormalities.	**Date**	**CF**

Table continued

NAME	DEFINITION	DATA TYPE (POSSIBLE VALUES)	MAPPING CF = Client Form REG = Register SUM = Summary Form IND = Indicator
Physical address	Current primary address/home of client for the purpose of follow-up and/or geographical analysis. Note: Physical address may be more useful than mailing address	**Text**	**CF to REG**
CLIENT SCREENING HISTORY			
Screened for cervical cancer in the past	Client history of cervical cancer screening (ever screened). Note: This element is self-reported [by client], unless electronic medical record (or other high-quality longitudinal client record) is being used and can be accessed. If data are pulled from a system, the response category of "NOT SURE" may be removed.	**Categorical Response** (YES, NO, NOT SURE)	**CF** *(cross-check for "first-time screening completed" element)*
If YES, screening was through	Method used in client's last screening. This element is captured for clinical management and can be used to monitor screening frequency and client follow-up/rescreening. See "Note" under "Screened for cervical cancer in the past" element.	**Categorical Response** (VIA, PAP SMEAR, HPV DNA TEST, NOT SURE)	**CF**
Result of past screening	Result of client's last screening. This element is captured for clinical management and can be used to monitor client treatment/follow-up. See "Note" under "Screened for cervical cancer in the past" element.	**Categorical Response** (POSITIVE, NEGATIVE, NOT SURE)	**CF**
If POSITIVE, was treatment performed	Action following POSITIVE result at client's last screening. This element is captured for clinical management and can be used to monitor client treatment/follow-up. See "Note" under "Screened for cervical cancer in the past" element.	**Categorical Response** (YES, NO, NOT SURE)	CF
[If YES] Type of treatment was performed	Type of treatment provided following POSITIVE result at client's last screening. This element is captured for clinical management and can be used to monitor client treatment/follow-up. See "Note" under "Screened for cervical cancer in the past" element.	**Categorical Response** (CRYOTHERAPY, LEEP, NOT SURE)	CF
When was the last screening	Day, Month, and Year of client's last screening. This element is captured for clinical management and can be used to monitor screening frequency and client follow-up/rescreening. Can be adapted to a categorical response variable (e.g. <1 year ago, 1–3 years ago, 3–5 years ago, >5 years ago) if EMR is not in use and in-country field testing shows that it is difficult for women to report exact date. See "Note" under "Screened for cervical cancer in the past" element.	**Date**	CF
[When was the last] Treatment	Day, Month, and Year of client's last treatment. This element is captured for clinical management and can be used to monitor client treatment/follow-up. Can be adapted to a categorical response variable (e.g. <1 year ago, 1 year ago, >1.5 years ago) if EMR is not in use and in-country field testing shows that it is difficult for women to report exact date. See "Note" under "Screened for cervical cancer in the past" element.	**Date**	CF
Is today's visit for a post-treatment complication?	Indicates that the client is returning due to post-treatment complication. Used to monitor post-treatment complications.	**Categorical Response** (YES, NO)	**CF to REG; Tally from REG to SUM; IND**
Gravidity	Element in reproductive health history indicating number of times a woman has been pregnant	Numeric	CF

Table continued

NAME	DEFINITION	DATA TYPE (POSSIBLE VALUES)	MAPPING CF = Client Form REG = Register SUM = Summary Form IND = Indicator
Parity	Element in reproductive health history indicating the number of pregnancies that the women has carried to a viable gestational age	Numeric	CF
HIV STATUS			
Last HIV Test Result	Self-reported result of Client's most recent HIV test. Captured in order to monitor patient care and integration of cervical cancer and HIV services. Used as a primary element for indicator disaggregation. If PITC is integrated into cervical cancer screening, use PITC elements below (from WHO Guide for M&E of National HTC Programmes). **Transfer to Register**: "Last HIV Test Result" response of NEGATIVE [>3 months ago], INCONCLUSIVE, NEVER TESTED or UNKNOWN on the client form is captured in the Register as UNKNOWN. **Note**: This element is self-reported [by client], unless electronic medical record is being used.	**Categorical Response** (POSITIVE, NEGATIVE [<3 months ago], UNKNOWN)	**CF to REG; Tally from REG to SUM; IND**
If Last HIV Test Result = POSITIVE	*FOR PITC: The cascade below is initiated through a "POSITIVE" response for self-reported "Last HIV Test Result", and is used for clinical management and patient monitoring.*	*N/A*	*N/A*
Date of last positive HIV test result	Day, Month, and Year of client's last HIV Test with a POSITIVE result. **Note**: This element is self-reported [by client], unless electronic medical record (or other high-quality longitudinal client record) is being used and can be accessed.	Date	CF to REG
Enrolment in HIV care and treatment services	HIV Positive client HIV care and treatment enrolment status. Enrolment in HIV care and treatment services is proxied as: client received clinical assessment or CD4 count or viral load testing following HIV Positive diagnosis; or client is currently receiving ART (see WHO Consolidated SI Guidelines http://apps.who.int/iris/bitstream/10665/164716/1/9789241508759_eng.pdf) See "**Note**" under "Date of last Positive HIV test result" element.	Categorical Response or Calculated (RECEIVED CLINICAL ASSESSMENT, RECEIVED CD4 COUNT, RECEIVED VIRAL LOAD or CURRENTLY RECEIVING ART; NOT ENROLLED)	CF to REG
Earliest CD4 count [or viral load]	CD4 count at the time of HIV Positive diagnosis; or first CD4 count taken at the time of enrolment into HIV care and/or treatment Where CD4 counts are not performed at the same time (and in the same venue) as the HIV test, the CD4 count nearest to the time of diagnosis is considered the count "at enrolment in care"; See "Note" under "Date of last Positive HIV test result" element.	Numeric	CF to REG
Earliest CD4 [or viral load] test date	Day, Month, and Year of first CD4 count (at time of diagnosis or at time of enrolment) See "**Note**" under "Date of last Positive HIV test result" element.	Date	CF to REG
Most recent CD4 count [or viral load]	Most recent CD4 count See "**Note**" under "Date of last Positive HIV test result" element.	Numeric	CF to REG
Most recent CD4 [or viral load] test date	Day, Month, and Year of most recent CD4 count See "**Note**" under "Date of last Positive HIV test result" element.	Date	CF to REG
If not enrolled, client referred for care and treatment	See definition of "enrolment" proxy under "Enrolment in HIV care and treatment services"	Categorical Response (YES, NO)	CF to REG

Table continued

NAME	DEFINITION	DATA TYPE (POSSIBLE VALUES)	MAPPING CF = Client Form REG = Register SUM = Summary Form IND = Indicator
If Last HIV Test Result = UNKNOWN	*FOR PITC: The cascade below is initiated through an "UNKNOWN" (includes: negative [over 3 months ago], inconclusive, never tested), response for self-reported "Last HIV Test Result", and is used for clinical management and patient monitoring.*	*N/A*	*N/A*
Provider-initiated testing and counselling (PITC) accepted (yes, no)	Eligible client acceptance/non-acceptance of PITC offered at cervical cancer screening visit. Captured in order to monitor patient care and integration of cervical cancer and HIV services. **Note**: PITC should be offered if client's reported previous HIV test result was INCONCLUSIVE, **or** if NEGATIVE test result was more than 3 months ago, **or** if client has NEVER TESTED.	Categorical Response (YES, NO)	CF to REG; Tally from REG to SUM; IND
If YES, PITC Test Date	Day, Month, and Year of PITC HIV Test captured to monitor PITC provision at screening visits.	Date	CF to REG
PITC Final Result	Final result of HIV test performed during cervical cancer screening visit (see Final HIV Status below).	Categorical Response (POSITIVE, NEGATIVE, INCONCLUSIVE)	CF to REG; Tally from REG to SUM; IND
PITC result received by client	Documents that the client received their HIV test result. Captured in order to monitor PITC provision at point of screening service.	Categorical Response (YES, NO)	CF to REG
Final HIV Status	Used as a primary element for indicator disaggregation. Final HIV Status is captured as: • POSITIVE if Previous HIV test result was POSITIVE or if PITC test result was POSITIVE • NEGATIVE if Previous HIV Test Result was NEGATIVE [<3 months ago] or if PITC test result was NEGATIVE • UNKNOWN if Previous HIV Test Result was INCONCLUSIVE or NEVER BEEN and PITC test was refused. Note: When previous HIV test result (self-reported) is captured on the same client form as PITC HIV test results, this element captures the Final HIV Status value that will be entered into the register/logbook.	Categorical Response (POSITIVE, NEGATIVE, UNKNOWN)	CF to REG; Tally from REG to SUM; IND
If Last HIV Test Result = UNKNOWN	*WHERE PITC IS **NOT** AVAILABLE: The optional element below is initiated through an "UNKNOWN" (includes: negative [over 3 months ago], inconclusive, never tested) response for self-reported "Last HIV Test Result", and is used for clinical management and patient monitoring.*	*N/A*	*N/A*
Client referred for HIV testing	Referral for HIV testing if HIV testing is not available through PITC and Previous HIV Test Result was NEVER TESTED or INCONCLUSIVE, or most recent NEGATIVE test was >3 months ago. Captured in order to monitor integration of cervical cancer and HIV services where PITC is not offered at cervical cancer screening service delivery point.	Categorical Response (YES, NO)	CF to REG; Tally from REG to SUM; IND
SCREENING			
Screening visit type	Indicates the type of screening visit the client is attending, based on their screening (and treatment) history. The screening visit type set of data elements is used for disaggregation of indicators. Most indicators either designate screening visit type to be captured, or include considerations for disaggregation. These elements are captured on paper-based forms in separate fields in order to ease tallying and aggregation; however they may be included in an electronic system as either: 1) individual Categorical Response (YES/NO) variables; or 2) as multiple answer values for one consolidated Categorical Response variable.	**Categorical Response** (FIRST-TIME, 1 YEAR POST-TREATMENT FOLLOW-UP, RESCREENING)	**CF to REG; Tally from REG to SUM; IND**
Screening Completed	Indicates status of screening Client-level source for calculation of Screening Rate indicator (NUMERATOR) and Screening Test Positivity Rate indicator (DENOMINATOR)	**Categorical Response** (YES, NO)	**CF to REG; Tally from REG to SUM; IND**

Table continued

NAME	DEFINITION	DATA TYPE (POSSIBLE VALUES)	MAPPING CF = Client Form REG = Register SUM = Summary Form IND = Indicator
If NO, (incomplete screening) list reason:	Open text field to capture reason for screening deferral Usually refers to gynaecological issue for which screening is contra-indicated (e.g. cervicitis)	**Text**	**CF**
VIA RESULT			
VIA result	Result of VIA-based cervical cancer screening Client-level source for calculation of Test Positivity Rate indicator (NUMERATOR) and Treatment Rate indicator (DENOMINATOR)	**Categorical Response** (NEGATIVE; POSITIVE; POSITIVE, SUSPECTED CANCER)	**CF to REG; Tally from REG to SUM; IND**
[If positive] Eligible for cryotherapy	Indicates whether client is eligible for cryotherapy treatment for precancerous lesion, or requires LEEP for larger lesions not eligible for cryotherapy	**Categorical Response** (YES, NO)	**CF to REG; Tally from REG to SUM; IND**
Screening map	Provider documents findings/lesion on basic cervix diagram/map	**Image**	**CF**
Clinical diagnosis	Clinical diagnosis of gynaecological problem (potentially resulting in screening deferral)	Text	CF
External genital and speculum examination results	Results of clinical pelvic exam	Text	CF
REFERRAL			
Referral to:	Name of site client is referred to for further services. Used for follow-up on client outcomes, and to monitor client referrals	**Text String**	**CF**
Referred for large lesions (not eligible for cryotherapy)	Date of and reason for client referral – large lesion ineligible for cryotherapy and requiring LEEP. Used to monitor client referrals; and disaggregate total number of referrals	**Date**	**CF to REG; Tally from REG to SUM; IND**
Referred for suspected cancer	Date of and reason for client referral – suspected invasive cancer. Used to monitor client referrals; and as a disaggregate for total number of referrals	**Date**	**CF to REG; Tally from REG to SUM; IND**
Referred for Cryotherapy	Date of and reason for client referral	**Date**	**CF to REG; Tally from REG to SUM; IND**
Referred for Other Gynaecological Issue	Date of and reason for client referral	Date	CF to REG; Tally from REG to SUM; IND
CRYOTHERAPY			
Cryotherapy completed at Screening Visit	Indicates that cryotherapy was performed on the same day as VIA screening The treatment and referral Categorical Response elements are captured on paper-based forms in separate fields in order to ease tallying and aggregation; however, they may be included in an electronic system as either: 1) individual dichotomous Categorical Response (YES/NO) variables; or 2) as multiple response choices for one consolidated Categorical Response variable.	**Categorical Response** (YES, NO)	**CF to REG; Tally from REG to SUM; IND**
Reason:	Reason cryotherapy was postponed. Used for follow-up on client treatment and outcomes, and to monitor client return.	**Text**	**CF**
Cryotherapy postponed	Indicates that VIA screening was completed, but cryotherapy was postponed. Used for follow-up on client treatment and outcomes, and to monitor expected client return.	**Categorical Response** (YES, NO)	**CF to REG; Tally from REG to SUM; IND**

Table continued

NAME	DEFINITION	DATA TYPE (POSSIBLE VALUES)	MAPPING CF = Client Form REG = Register SUM = Summary Form IND = Indicator
Postponed cryotherapy completed today	Indicates that the client received cryotherapy treatment that had been postponed after receiving a positive screening result. Used to monitor treatment of precancerous lesions (and impact on precancerous lesion treatment completion using "Single Visit" or "Same Day Screen and Treat" approaches)	**Categorical Response** (YES, NO)	**CF to REG; Tally from REG to SUM; IND**
Referred-in Cryotherapy Completed Today	Indicates that the client has received cryotherapy treatment as a result of a referral.	**Categorical Response** (YES, NO)	**CF to REG; Tally from REG to SUM; IND**
Referral for cryotherapy from:	Name of the site to which the client is being referred for cryotherapy. May be included where cryotherapy is not performed ONLY as part of a "Single Visit" or "Same Day Screen and Treat" Approach	Text	CF to REG; Tally from REG to SUM; IND
Cryotherapy provider's initials	Abbreviation of treatment provider: Given name/s and Surname/s Transferred from client screening form	**Text**	**CF to REG**
LEEP			
Eligible for LEEP	Indicates that the client was eligible for LEEP upon visualization at LEEP visit	Categorical Response (YES, NO)	**CF to REG**
LEEP performed	Indicates that LEEP was provided for the treatment of precancerous lesions. Used to monitor LEEP service provision and precancerous lesion treatment.	**Categorical Response** (YES, NO)	**CF to REG; Tally from REG to SUM; IND**
LEEP provider's initials	Abbreviation of treatment provider: Given name/s and Surname/s	**Text**	**CF to REG**
NOTES/FOLLOW-UP			
Notes/follow-up	Open text field to capture provider notes	**Text**	**CF**

SECTION 4

FACILITY-BASED SURVEYS

INTRODUCTION

In order to make informed decisions, cervical cancer prevention and control programmes require accurate, up-to-date information on the availability of cervical cancer services, the capacity and readiness of facilities to deliver services, and the quality of the services being delivered.

Service availability primarily refers to the physical presence of facilities or mobile units providing services for cervical cancer. Information on the presence and distribution of services is a prerequisite to scaling-up and maintaining a quality national programme; however, service availability does not guarantee that quality services are being provided.

Facility readiness refers to the capacity of facilities or mobile units to provide services for cervical cancer, and is a necessary precondition for quality services. Key inputs (e.g. trained staff, infrastructure, basic equipment, supplies) and processes (e.g. monitoring systems, procurement systems, referral mechanisms) must be in place in order to deliver high quality services; however, as with service availability, a facility's readiness to provide services does not necessarily guarantee the provision of quality services.

To facilitate the collection and analyses of this key information, this section presents tools and methods which can be adapted and implemented based on programme information needs, context, and available resources. Comprehensive, but not exhaustive, this package of tools and methods supports programmes to:

- Strategically plan cervical cancer service introduction and scale-up;
- Establish a baseline of cervical cancer-specific service availability, readiness, and quality;
- Monitor service availability, readiness, and quality during scale-up and introduction, and routine programming; and
- Implement service quality improvement processes.

The tools for the Facility-based Survey enable the direct measurement of specific inputs, processes and outputs against core standards for cervical cancer secondary prevention services. In addition, the guiding information presents considerations relevant to invasive cervical cancer service availability and readiness, and to addressing cervical cancer services in existing nationally representative facility surveys.

ASSESSING SERVICE AVAILABILITY, FACILITY READINESS, AND QUALITY OF SERVICES

A number of methodologies exist for assessing and monitoring service availability, facility readiness, and quality of services. The choice of methodology should be primarily dependent on the motivation for, and purpose behind, gathering the information. Additional factors such as available programme resources and existing planned surveys which may be leveraged to capture cervical cancer service information must also be considered when determining the most feasible and appropriate approach.

This section presents the Supportive Supervision process for documenting service availability and assessing facility readiness and performance and quality; and presents a standalone Facility Readiness Assessment (see Implementation Tools and Materials) for documenting service availability and assessing facility readiness. These approaches are designed to obtain facility-specific information, and are not intended to achieve results which may be generalizable to the broader health system – or to other facilities. The related tools gather the information necessary to answer the set of core questions presented in Table 4.1., thereby informing scale-up or introduction of services, and enabling the routine monitoring of service availability, readiness, and quality.

TABLE 4.1
Questions answered by facility readiness assessment and supportive supervision

QUESTIONS ANSWERED BY FACILITY READINESS ASSESSMENT AND SUPPORTIVE SUPERVISION
What cervical cancer prevention and control services are available? Where are they available? Are facilities providing the services they are designated to provide?
Do the cervical cancer services available address the need?
Are there sufficient trained staff providing cervical cancer services?
Are there additional staff available to be trained to provide cervical cancer services to meet any increase in need?
Do facilities have the basic infrastructure necessary to provide quality cervical cancer services?
Do facilities have procurement and supply chain mechanisms that ensure continuous provision of cervical cancer services and avoid stockouts?
Do facilities have the basic equipment and supplies necessary to provide quality cervical cancer services?
Do facilities have the basic requirements for infection prevention?
Do facilities have the basic medicines and point-of service testing required to provide quality cervical cancer services?
Do facilities have the basic data management materials and processes in place to support routine monitoring and inform improvement of cervical cancer services?
Do facilities have functional and clearly defined referral mechanisms as part of the continuum of cervical cancer care?
Are national cervical cancer policies and guidelines available and understood?
What activities are being conducted to ensure community awareness of cervical cancer services and increase demand for those services?
SUPPORTIVE SUPERVISION ONLY:
Are high-quality cervical cancer services being provided at the facility?
What is the quality of the routine data being collected? Are these data understood and used for decision-making?
What are client and community perceptions of the quality of cervical cancer services being provided by the facility?

The package of Implementation Tools and Materials at the end of this section provides a tool, indicators and guiding information to support the aggregation of information gathered through facility-based surveys, including analyses and mapping of services at a national or subnational level.

These periodic facility assessments expand the understanding gained through monitoring cervical cancer services using routinely collected and reported data, such as those presented in Section 3, Patient and Programme Monitoring. The detailed information

in Section 3, relating to indicator calculation and data quality, can also be used as a reference for assessing data management, quality, and use as part of Supportive Supervision (or Facility Readiness Assessments).

Large-scale national or subnational surveys to assess service-specific availability, readiness, and quality are typically quite resource intensive, and are not often feasible for cervical cancer programmes; however, existing or planned facility surveys may be leveraged to collect information on cervical cancer services in order to maximize resources and minimize duplication of effort. When determining opportunities for leveraging, it is important to consider whether the purpose of the existing survey aligns with programme information needs.

The WHO Service Availability and Readiness Assessment (SARA) is one example of a globally established facility survey focused on monitoring the provision of basic health services. SARA captures a limited amount of cervical cancer service-specific availability and readiness information; however it does not assess the quality of services provided.

Facility surveys such as SARA, the Service Provision Assessment (SPA), and potentially the Health Facility Census, answer basic questions necessary to periodically assess cervical cancer services as part of a general health service availability, readiness and quality monitoring process; and to broadly inform the need for scale-up or introduction of cervical cancer services, while identifying areas for more in-depth assessment. The broader focus of the SARA is clearly illustrated by the core questions it answers, as listed in Table 4.2.

TABLE 4.2

Questions answered by Service Availability and Readiness Assessment (SARA)

QUESTIONS ANSWERED BY SERVICE AVAILABILITY AND READINESS ASSESSMENT (SARA)
What is the availability of basic packages of essential health services offered by public and private health facilities?
Is there an adequate level of qualified staff?
Are resources and support systems available to assure a certain quality of services?
How well prepared are facilities to provide high-priority services such as reproductive health services, maternal and child health services, and infectious disease diagnosis and treatment (e.g. HIV, sexually transmitted infections, tuberculosis and malaria)?
Are facilities ready to respond to the increasing burden of noncommunicable diseases?
What are the strengths and weaknesses in the delivery of key services at health-care facilities?

Source: http://www.who.int/healthinfo/systems/sara_reference_manual/en/

A tool and a set of tracer indicators to support the leveraging of existing facility surveys for gathering cervical cancer-specific service information are provided in the package of Implementation Tools and Materials at the end of this section.

THE SUPPORTIVE SUPERVISION PROCESS

Supportive supervision is the process of assessing, mentoring, and encouraging health personnel to improve their performance, with the ultimate goal of improving the quality of services. The primary objectives are to:

- Identify issues with provider and facility performance;
- Identify internal and external factors that may be impacting quality of services;
- Provide immediate mentoring to address critical issues, and develop a practical action plan to address those that remain; and
- Guide quality improvement measures as part of an ongoing quality assurance and improvement process.

METHODOLOGICAL CONSIDERATIONS

FREQUENCY

The first Supportive Supervision visit should be conducted immediately after clinical training in order to ensure transfer of learning to the work site, and to identify any immediate internal and external factors at the facility which may impact quality of services. If this is not feasible, the visit should be conducted within 2–6 weeks following clinical training. Subsequent visits should be conducted every 3–6 months for the first year, and less frequently for following years for those facilities regularly meeting the standards. The three Performance categories may be used as separate tools for conducting interim peer-to-peer or self-assessments; however, assessment of both the Performance and the Readiness categories is required to achieve the objectives of a true Supportive Supervision visit.

SAMPLING

Given that the primary objectives of Supportive Supervision are to identify and address factors impacting the quality of services, the process is intended to be conducted at all facilities providing cervical cancer services, including mobile units. Data gathered from a purposive sample such as this, has certain limitations and is not intended to be more broadly generalizable or representative. Additional guiding information for aggregating, analysing, and interpreting data gathered across facilities through Supportive Supervision visits can be found in the Implementation Tools and Materials, as well as in "Assessing Service Availability, Facility Readiness and Performance".

PLANNING THE SUPPORTIVE SUPERVISION VISIT

The Supportive Supervision visit should be arranged for a date when the clinical trainer/supervisor and the M&E advisor are able to attend for the entire visit, and should be scheduled when convenient for facility staff. The core of the assessment occurs during the facility visit, which should be completed in one day.

The Pre-Visit Checklist and Worksheet found in the Implementation Tools and Materials package helps in planning the Supportive Supervision visit and in gathering pertinent information that will be verified during the visit.

The supervision team should consist of at least one cervical cancer screening and treatment technical supervisor and one M&E advisor and should be divided into two groups:

- Group 1: led by the technical supervisor, focuses on assessing the Provider Performance, Client and Community Assessments, and Facility Readiness sections (see Supportive Supervision tool);
- Group 2: led by the M&E advisor, focuses on assessing the Data Management and Meeting Key Indicator Benchmarks sections (see Supportive Supervision tool).

The team leaders of each group will manage the overall planning of the visit, organize how data will be collected, and designate who on the team will collect it.

Prior to the visit, team members need to be completely familiar with national guidelines, accepted standards of care, and the categories, standards, and scoring system of the Supportive Supervision tool (see Implementation Tools and Materials). Ideally, a workshop for orientation to the tool and how to conduct the visit would be made available for first-time users.

ETHICAL CONSIDERATIONS

The Supportive Supervision visit includes two activities for which informed consent, above the normal consent for conducting procedures, must be obtained:

1) Observation of client screening and precancerous lesion treatment, necessary to assess the Provider Performance categories; and,

2) Interviews with clients, as part of assessing the Facility Performance: Client and Community Assessments category.

Prior to the visit, the supervision team must have a plan for obtaining informed consent from observed or interviewed clients. While informed consent requirements will vary slightly by country and programme, most informed consent scripts include information on:

- The purpose of the interview or observation;
- The interview or observation process;
- How the information being collected will be used;
- Confidentiality;
- Voluntary participation; and
- Any potential risk and/or benefit to the client.

Clients and other interviewees must be assured that participating, or not participating, in interviews or observations will not affect their access to quality services. Observations of provider performance should be conducted in the private examination room (or large room with privacy screens – as described in the Supportive Supervision tool under the Facility Readiness Category 5: Infrastructure) typically used for screening and treatment services. Interviews with clients should be conducted as privately as possible.

CONDUCTING THE SUPPORTIVE SUPERVISION VISIT

INBRIEF MEETING

The visit should begin with a previously scheduled inbrief meeting with the medical director, administrators, senior matron, doctors, and other health-care workers and support staff, who are providing cervical cancer prevention services.

The objective of this meeting is to communicate:

- The visit objectives, purpose, and assessment and feedback methods; and
- What will be required during the visit (e.g. walk-through of clinic space, inspection of equipment and supplies, review of data forms and logbooks, direct observation of services being provided, etc.).

DATA COLLECTION

The assessment team completes the supportive supervision tool based on direct observation, review of records or logbooks, interviews with health workers, pharmacists, and their supervisors, as well as survey of clients or community members. Information collected before the visit (see the planning materials in the Implementation Tools and Materials package), or based on interviews, questionnaires, or record/register review, should be verified by direct observation as much as possible.

SUPPORTIVE SUPERVISION TEAM DEBRIEF

Immediately after completing the visit, the supervision team should regroup to share key findings and assessment scores, and to agree on the issues to be discussed during the Facility Staff Debrief. The team will discuss and reach consensus on all scores, the facility's strengths and weaknesses, and the priority gaps to be addressed. The team should complete the Performance Summary dashboard and the Facility Readiness Summary dashboard (see Implementation Tools and Materials) based on their discussion, and agree on who will provide feedback on which categories.

Low Performance and/or Facility Readiness Scores (with colour status of Red or Yellow) and other issues should be transferred to the Action Plan table provided at the end of the Supportive Supervision tool, found in the package of Implementation Tools and Materials at the end of this section. The supervision team will then work with the staff during the Facility Staff Debrief to develop a detailed Action Plan based on the issues identified, their impact on service quality, and the feasibility of proposed interventions to address them.

FACILITY STAFF DEBRIEF

The purpose of the staff debrief is to provide immediate feedback, review the supportive supervision visit findings, and start planning corrective action as part of the quality improvement process. If feasible, the same facility staff members who attended the inbrief meeting, should also attend the debrief meeting. (There may be instances in which the medical director and other administrators may require a separate debrief meeting.)

The supervision team will take this opportunity to:

- Review the purpose of the supportive supervision visit and of the debrief meeting;
- Hear from the facility staff on what they perceive to be the strengths and areas that need improvement;
- Discuss where the supervision team and facility staff agree and disagree on the strengths identified;
- Discuss areas that need improvement, especially those that have a significant impact on quality of services and outcomes;
- Provide immediate mentorship and capacitation; and,
- Encourage open communication from the staff and facilitate their active participation in the development of the action plan.

At the close of the Facility Staff Debrief, the supervision team will provide the facility with copies of the Performance and Facility Summary Dashboards, and the completed Action Plan. It is the supervision team's responsibility to ensure a plan for follow-up on corrective action is in place before leaving the facility.

THE SUPPORTIVE SUPERVISION TOOL

The Supportive Supervision tool provides a standardized structure for conducting supportive supervision visits, and allows for the periodic generation of reliable information on cervical cancer service availability, facility readiness to provide services, and the quality of services provided. The tool comprises three Performance Categories and thirteen Facility Readiness Categories, with corresponding core standards and scoring guides for each category embedded in the tool. The full survey tool can be found in the package of Implementation Tools and Materials at the end of this section.

The three Performance Categories facilitate a direct assessment of the quality of service provision and data management against established performance standards – a key part of quality assurance in a national cervical cancer programme. Table 4.3 shows the three Performance Categories and describes the standard for each category, along with considerations for adaptation prior to implementation. Adaptation to the Performance Categories should be undertaken with care, and should be limited to alignment of services, indicators and processes to national policies and guidelines.

TABLE 4.3
Performance categories

PERFORMANCE CATEGORY	DESCRIPTION OF STANDARD	NOTES ON ADAPTATION
Performance Category 1: Provider Skill	The provider complies with standards for service provision: prepares for, counsels, assesses, and performs procedures competently; demonstrates good infection prevention and control practices; and correctly documents findings.	Services may be included or removed to reflect programme context. (See subsection "Extended Note on Adaptation" below)
Performance Category 2.1: Data Collection and Management	Quality data are collected, recorded, and stored properly.	
Performance Category 2.2: Key Indicators and Benchmarks	Key indicators and targets are understood, and benchmarks are met.	Indicators (and local targets) should be adapted to those required by the National programme.
Performance Category 3: Client and Community Assessments	Client and community assessments on their perceptions of quality of care provided are routinely conducted, and these perceptions of quality of care are high.	

Assessment of specific inputs and processes necessary for facility readiness enables the identification of systemic weaknesses which may reduce performance quality. Table 4.4 below shows the thirteen Readiness categories, their associated standards for cervical cancer secondary prevention services, and considerations for adaptation prior to implementation.

TABLE 4.4
Facility Readiness categories

READINESS CATEGORY	STANDARD	NOTES ON ADAPTATION
Readiness Category 1: Services	Facility is providing the services it is designated to provide.	Services may be included or removed as appropriate, for example: · Removing Single Visit Approach · Assessing lab-specific services such as specimen processing and testing (for HPV testing); slide or specimen evaluation (Pap smear or LBC); histological/pathological analysis (biopsy) · Including other screening (e.g. digital cervicography) or treatment (e.g. thermal coagulation) methods Elements to capture frequency of service provision may be added
Readiness Category 2: Service Utilization	In a facility where services are currently being provided, screening and treatment targets are met.	Other essential indicators and targets may be added to the items, for example: · Single Visit Approach Rate · Percentage of screen-positive women who received a triage examination
Readiness Category 3: Staffing	Sufficient numbers of trained providers are currently providing services to meet need.	Other cadres may be added as appropriate, for example: · Laboratory technician · Cytotechnologist · Pathologist Elements to capture more in-depth information on provider availability (e.g. part-time or full-time; rotating or fixed) may be added
Readiness Category 4: Potential Staffing	Sufficient number of providers are available who meet selection criteria to be trained in desired skill and are available to provide services once trained.	Other cadres may be added as appropriate, for example: · Laboratory technician · Cytotechnologist · Pathologist Elements to capture more in-depth information on provider availability (e.g. part-time or full-time; rotating or fixed) may be added
Readiness Category 5: Infrastructure	Basic items are present and functional (over the past 3 months).	Standard items, may be added based on types of services provided and programme context, for example: · Reliable electric power is essential if providing certain services (e.g. HPV testing, LEEP), but not essential if only providing services such as VIA · Transport/storage of samples is essential if providing HPV testing or cytology
Readiness Category 6: Procurement and Supply Chain	A functional procurement and supply chain system is in place (measured by compliance with 4 items).	Standard items can be adapted or further specified based on programme context, for example: The assessment of timely entry of inventory/stock data may be considered essential – particularly If an electronic or centralized procurement system is used.
Readiness Category 7: Equipment and Supplies	Items are of sufficient quantity, continuously available, and functional (over the past 3 months).	Standard items may be added (or deleted) based on programme context and types of services provided.

Table 4,4 continued

READINESS CATEGORY	STANDARD	NOTES ON ADAPTATION
Readiness Category 8: Infection Prevention	Items are continuously available and functional (over the past 3 months).	Standard items may be added (or deleted) based on programme context and types of services provided, for example: · If LEEP is not part of services offered at the facility, high-level disinfection (HLD) is appropriate as a minimum requirement for infection prevention and control. · Specifying the type of sterilization or HLD to be used, based on national guidelines. · **For mobile unit**: For short-term mobile outreach, if sufficient instruments are available so that reuse is not necessary, then HLD is no longer applicable.
Readiness Category 9: Medicines and Testing	Items are continuously available and accessible (over the past 3 months).	Standard items can be adapted or further specified based on programme context, for example: · Specifying and listing the antibiotics for treatment of cervicitis and STIs. · Other analgesic medicines Standard items relevant to expiration/storage of test kits may be added
Readiness Category 10: Data Management	Items (materials and processes) are continuously available and functional (over the past 3 months).	Standard items may be modified based on programme context, for example: · Modifying the items assessed (screening forms, registers, etc.) to reflect national data collection and management processes · Include forms/processes relevant to laboratory specimen processing (laboratory information system, specimen tracking forms, etc.)
Readiness Category 11: Referral Mechanisms	Referral mechanisms are clearly defined and functional.	Standard items may be modified based on programme context, for example: · Modifying items to specifically assess electronic systems for referrals (and referral feedback) · Modifying items assessed to reflect service integration · For HPV testing and cytology – modifying items to assess coordination between the laboratory and screening facilities (e.g. availability of laboratory processing request forms, guidelines for specimen flow, standardized process for information flow and communication of results, etc.)
Readiness Category 12: Policies and Guidelines	Relevant and current national guidelines and policies are displayed or readily available, and well understood.	Standard items may be modified based on programme context, for example: · Modifying items to align with national Standard Operating Procedures for the display of guidelines · Adding guidelines for specimen processing, test kit manufacturers guidelines, etc.
Readiness Category 13: Community Sensitization and Mobilization	Activities have been continuously conducted and material present (over the past 3 months).	Standard items may be modified based on programme context, for example: · Including additional activities or adapting list of materials · Include assessment of databases or information systems used to manage materials or track activities

EXTENDED NOTES ON ADAPTATION

ASSESSING PROVIDER PERFORMANCE FOR HPV TESTING AND CYTOLOGY

While sample collection technique, provider-client interaction, and procedure documentation by the provider can be directly observed at the facility, one of the key measures of provider performance in HPV testing and cytology is sample adequacy. Sample adequacy is determined at the laboratory during processing, and therefore cannot typically be directly observed or assessed during a supportive supervision visit. As a proxy, a review of data – ideally, data specific to each provider – for key performance indicators such as Inadequate Sample and [client] Received Test Results (see Section 3, Patient and Programme Monitoring for indicator details) should supplement the direct observation.

In addition to adapting items in Category 5 (see details in Table 4.4), triangulation with Sample Submission Time indicator data (see Section 3, Patient and Programme Monitoring for indicator details) can help to assess whether providers and facilities are meeting the standard for sample storage/transport.

The items within the Performance categories of the tool can be adapted to assess a provider's performance against the below set of standard procedural steps described in *Integrating HPV testing in cervical cancer screening programs: a manual for program managers* [PAHO 2016], and the *WHO Comprehensive cervical cancer control: a guide to essential practice* [WHO, 2014]. These standard steps should be adapted according to national clinical practice and laboratory guidelines, and manufacturers' instructions where applicable.

STEPS FOR HPV TESTING

GETTING READY

1. Ensure that room, all equipment and supplies are ready for use.

2. Explain what an HPV test is and what a positive or negative test result means, and why it is important to return for the test results and act on them appropriately.

3. Ensure that the woman has understood the explanation and consents to the procedure.

4. Perform a gynecological examination.

TAKING THE SAMPLE (PROVIDER-COLLECTED SAMPLE)

1. Obtain a sample from the cervix with the brush or swab, following the manufacturers' instructions corresponding to the type of collecting device.

2. Place the brush or swab in the collection tube containing preservative solution.

3. Place used instruments in a decontamination solution.

4. Label the tube with the necessary information (e.g. woman's given name and surname, patient identification number, date, etc.)

TAKING THE SAMPLE (CLIENT-COLLECTED SAMPLE)

1. Explain to the client how to collect her own sample, in accordance with the manufacturer's instructions.

2. Provide her with swabs and a labelled vessel with preservative solution.

   a. She can collect the specimen in the clinic, if there is a private area, or at home. If she collects the specimen at home, it should be brought back to the facility within the time frame specified by the manufacturer of the test kit, and the client should be informed when to return for the test results.

AFTER TAKING THE SAMPLE

1. Record the taking of the sample on the screening form/patient chart, along with any observations.

2. *For provider-collected sample* – Tell the client about anything unusual you noted. If you saw something for which you wish to refer the woman to a higher-level facility, explain why, where and when she must go, and whom to see; stress the importance of keeping this appointment.

3. Tell the woman when to return for the test results.

STORING AND TRANSPORTATION OF COLLECTION TUBES (EXAMPLE REQUIREMENTS – ADAPT TO MANUFACTURER'S INSTRUCTIONS)

1. Store collection tubes at room temperature (15–30 °C).

   a. Transport to the laboratory does not require refrigeration.

   b. The tubes can be preserved for 2–3 weeks at room temperature.

   c. In the laboratory, samples can be preserved for up to one additional week at 4 °C and up to 3 months at -20 °C.

2. Do not use the test after the indicated expiration date.

STEPS FOR CYTOLOGY

GETTING READY

1. Ensure that room, all equipment and supplies are ready for use.

2. Explain the procedure, what a positive or negative test result will mean, and why it is important to return for the test results and act on them appropriately.

3. Ensure that the woman has understood the explanation and consents to the procedure.

4. Do a speculum examination.

TAKING THE SAMPLE (PAP SMEAR)

1. Insert the long tip of the spatula or brush into the cervical os, and rotate it through a full circle (360°).

2. Smear both sides of the spatula onto the glass slide with one or two careful swipes (or roll the brush onto the slide).

   a. If you see any abnormalities outside the area sampled, take a separate specimen and smear it onto another slide.

3. Immediately fix each slide, even before removing the speculum from the vagina (fixing only takes a few seconds): either use a spray fixative, at a right angle to, and a distance of 20 cm from, the slide, or immerse the slide in a container of 95% ethanol and leave it for at least five minutes (while you proceed with the next steps).

   a. If the slide is not fixed immediately, the cells will dry and become misshapen; this will make it impossible to read the slide accurately in the laboratory.

4. Gently close and remove the speculum.

TAKING THE SAMPLE (LIQUID-BASED CYTOLOGY (LBC))

1. Insert the brush or spatula into the cervical os, and rotate it through a full circle (360°).

2. Transfer the specimen from the brush or spatula to the special preservative solution in a tube.

3. Gently close and remove the speculum.

AFTER TAKING THE SAMPLE

1. Place all used instruments in decontamination solution.

2. Label the frosted edge of each slide (Pap smear) or container (LBC) with the necessary information (e.g. woman's given name and surname, patient identification number, date, etc.).

3. Record the taking of the sample on the screening form/patient chart, along with any observations

4. Ask the client if she has any questions and provide clear answers.

5. Tell her when and how she will receive the test results and stress the importance of returning for her results.

   a. Ideally, results should be sent back to the clinic from the laboratory within 2–3 weeks. It is not acceptable for the laboratory to take more than a month before reporting back.

6. If you saw something for which you wish to refer the woman to a higher-level facility, explain why, where and when she must go, and whom to see; stress the importance of keeping this appointment.

NEW SCREENING AND TREATMENT TECHNOLOGIES

This tool covers the screening and precancerous lesion technologies currently recommended by WHO. As technologies continue to advance, the tool can be adapted to enable assessment in line with those technologies. The tool may be easily adapted to include screening and triage techniques and adjuvants such as digital cervicography or smart-phone-based mobile colposcopy, by referencing manufacturers' guidelines and technical specifications and expanding the VIA-related elements. The tool may also be adapted to include new precancerous lesion treatment technologies, such as thermal coagulation, by referencing manufacturers' guidelines and technical requirements and adapting the cryotherapy-related elements (e.g. remove gas from required supplies). Where these new technologies are being piloted and tested, it is vital that findings be made available in order to strengthen the global evidence base.

SCORING PROVIDER PERFORMANCE AND FACILITY READINESS

PERFORMANCE CATEGORY SCORING

1. Provider Performance

Provider Performance is assessed using the standardized clinical skills checklists included in the tool. The Performance Standard is to competently perform the clinical skill based on the verification criteria for each skill. The Performance (or Skill) Score given to providers is based on the level of compliance with the performance standard.

2.Facility Performance: Data Quality and Use

The Performance Standard relies on continuously available and functional core data management Items, proper data collection and use, and meeting key indicator benchmarks. The Data Audit Table should be completed before assessing Data Quality and Use, because the audit provides much of the information required. It is preferable to review data from at least 1 month previously; however, review of the previous 3 months is recommended for more accurate representation. The Data Performance Score is based on the level of compliance with the performance standard. Please see the Supportive Supervision tool and Section 3 of this toolkit, Patient and Programme Monitoring, for additional guiding information on assessing and monitoring the quality and management of routine data.

3.Facility Performance: Client and Community Assessments

Client and Community assessments provide information on client and community perceptions of the quality of cervical cancer prevention services provided at the facility. Feedback can be obtained through conducting client interviews, keeping a suggestion box in the clinic, or meeting with community members. The Data Performance Score is based on routine client and community assessments and the perception that services are of high quality.

FACILITY READINESS CATEGORY SCORING

Individual scores are assigned to each item in a Facility Readiness Category based on how it meets the Standard. Scoring guides are provided for each Category to assist in developing scores. The Category Readiness Score is calculated as the average of all the individual scores in that Category.

For further detailed information on scoring for the Facility Readiness categories, refer to the Facility Readiness Categories in the Supportive Supervision tool.

PERFORMANCE AND FACILITY READINESS SUMMARY DASHBOARDS

These tables provide a snapshot view of the overall performance of the providers and the facility. The Performance Category Scores captured in the table include: 1) Average Provider Skill Performance scores, 2) Average Data Performance scores, and 3) Average Client and Community Assessment Performance score. Averaging the scores of each of these performance areas calculates the Summary Performance Score. The Facility Readiness Scores captured in the table include the average Readiness Score for each Facility Readiness Category, as well as the Summary Facility Readiness Score (average of Facility Readiness Category scores).

The dashboard form of presentation helps visualize the facility and provider performance, and is particularly useful for busy managers or ministry officials who are reviewing many reports. It also helps to track facility and provider progress over time and across facilities.

ELECTRONIC DATA CAPTURE AND MANAGEMENT

In order to make information more readily available, and to track capacity and quality across time, the Supportive Supervision and Facility Readiness survey data may be captured and managed electronically. In the interest of maximizing limited resources, a number of open-source customizable platforms are available for consideration. Many such platforms provide programmes and applications at no cost, which can be installed on existing or newly purchased hardware (e.g. smart phones, tablets) that meet technical specifications.

The Supportive Supervision Application described below was built on a no-cost open source platform using the paper-based Supportive Supervision Tool as a guide for the electronic form creation. This application has been used for tablet-based mobile data capture and analysis during the field implementation of the Supportive Supervision and Facility Readiness surveys.

APPLICATION DESCRIPTION

With a data collection application, supervisors, assessors, providers, and other users at the facility level can administer the tool electronically on a tablet. The application automates “skip logic” and colour-coded scoring, and it includes built in data validation and guidance. Built-in prioritization for the

Action Plan prompts the user to transfer the findings from the Supportive Supervision Application to the hard copy Action Plan for the facility.

After data are collected at the facility level, they can be submitted wirelessly whenever the user has a mobile network or Internet connection. The data are sent to a cloud database, where they are stored for future export into CSV format, or viewing in near-real time reports. This type of data aggregation and analyses allows for time series data regarding Supportive Supervision visits to be viewed by supervisors and other stakeholders in ways not previously possible, providing a more complete view of quality and facility readiness over time.

CONSIDERATIONS

While a high level of expertise in information technology or computer programming may not be required to build and customize many currently available no-cost applications, previous experience with other electronic data capture or data management platforms is beneficial.

Hardware (smartphones, tablets, etc.) previously purchased may be re-purposed for data collection; however, it is important to ensure that the hardware meets the required technical specifications for data collection applications.

IMPLEMENTATION TOOLS AND MATERIALS

SUPPORTIVE SUPERVISION TOOL

FACILITY INFORMATION

Facility Name:	
Name/Contact Information of Primary Contact Person at Facility:	Name: _____ Position: _____ Phone: _____ Email: _____
Location (District and City/ Village):	District: _____ City/Village: _____
GPS Coordinates:	GPS Points: _____ Format (e.g. DMS, UTM):_____ Source: _____ Validated/Collected On-site: ☐ Yes ☐ No
Type of Facility: *Choices should be adapted to context*	☐ Public ☐ Private ☐ NGO (Nongovernmental Organization) ☐ FBO (Faith-Based Organization) ☐ Other (explain) _____
Level of Facility: *Choices should be adapted to context*	☐ Mobile Unit ☐ Clinic ☐ Health Centre ☐ Hospital (District) ☐ Hospital (Regional) ☐ Hospital (National) ☐ Other (explain) _____
Number of Women in Target Population (or Catchment Population) for Screening:	

VISIT INFORMATION

Date of Visit: Date of Most Recent Facility Readiness Assessment or Supportive Supervision Visit:	
Assessment Team Members:	Name: _____ Title: _____ Name: _____ Title: _____

FACILITY SERVICES

Instructions: indicate with an **X** which services are currently being provided (on the left) as well as the planned additional services (on the right), if applicable. This information should have been obtained during the completion of the planning worksheet prior to the supportive supervision visit. Transfer the information from the planning worksheet to this area, and utilize the visit as an opportunity to validate information gathered during planning.

Existing designated cervical cancer screening and treatment services being provided ***(if any)***:	**Planned additional** cervical cancer screening and treatment services being assessed for readiness ***(if any)***:
☐ None	☐ None
☐ Cytology (sample collection)	☐ Cytology (sample collection)
☐ Cytology (processing)	☐ Cytology (processing)
☐ HPV Test (sample collection)	☐ HPV Test (sample collection)
☐ HPV Test (processing)	☐ HPV Test (processing)
☐ VIA	☐ VIA
☐ VILI	☐ VILI
☐ Cryotherapy	☐ Cryotherapy
☐ Single Visit Approach	☐ Single Visit Approach
☐ LEEP	☐ LEEP
☐ Colposcopy	☐ Colposcopy
☐ Biopsy	☐ Biopsy
☐ Endocervical Curettage	☐ Endocervical Curettage
☐ Histology/Pathology	☐ Histology/Pathology
☐ Other:	☐ Other:

DASHBOARD: SUMMARY PERFORMANCE AND FACILITY READINESS SCORES AND STATUS COLOUR

Instructions: To calculate the Overall Performance Score, enter the Performance Scores for Provider Skill (average score across providers, for each skill assessed), Data Collection and Management and Indicators and Key Benchmarks, and Client and Community Assessments in the table below. Calculate the average Performance Score for Provider Skill and Data Quality and Use categories. Add the Provider Skill Performance Score, Data Quality and Use Performance Score and the Client and Community Assessments Performance Score and divide by 3.

To calculate the Overall Facility Readiness Score, enter the Readiness Score for each category assessed in the table below. Add them and divide by the number of categories assessed. *Example*: *if all 13 Readiness Categories are assessed, and the sum of the 13 Readiness Scores is 20, the Overall Facility Readiness Score is 20/13 = 1.5, and has a status colour of Yellow.*

Note: Leave a copy of this table with facility staff upon completion of the Supportive Supervision Visit.

PERFORMANCE CATEGORY	**STATUS COLOUR** *(Place an "X" in the appropriate box)*		
	1.8 to 2.0 (Green)	**1.0 to 1.7 (Yellow)**	**0.0 to 0.9 (Red)**
1. Provider Skill			
1.1 Provider Skill: VIA			
1.2 Provider Skill: Cryotherapy			
1.3 Provider Skill: LEEP			
Provider Skill Performance Score *(calculated average of the scores for each skill)*			
2. Data Quality and Use			
2.1 Data Collection and Management			
2.2 Key Indicators and Benchmarks			
Data Quality and Use Performance Score *(calculated average of the scores for each data subcategory)*			
3. Client and Community Assessments			
Client and Community Assessments Performance Score			
OVERALL PERFORMANCE SCORE *(CALCULATED AVERAGE OF THE 3 CATEGORY PERFORMANCE SCORES)*			
COMMENTS:			

FACILITY READINESS CATEGORY	SCORE	STATUS COLOUR *(Place an "X" in the appropriate box)*		
		1.8 to 2.0 (Green)	1.0 to 1.7 (Yellow)	0.0 to 0.9 (Red)
1. Services				
2. Service Utilization				
3. Staffing				
4. Potential Staffing (if applicable)				
5. Infrastructure				
6. Procurement and Supply Chain				
7. Equipment and Supplies				
8. Infection Prevention				
9. Medicines and Testing				
10. Data Management				
11. Referral Mechanisms				
12. Policies and Guidelines				
13. Community Sensitization/Mobilization				
OVERALL FACILITY READINESS SCORE *(CALCULATED AVERAGE OF THE CATEGORY READINESS SCORES)*				
COMMENTS:				

PROVIDER AND FACILITY PERFORMANCE CATEGORIES

PERFORMANCE CATEGORY 1: PROVIDER PERFORMANCE

PERFORMANCE CATEGORY 1.1: PROVIDER SKILL – VIA

Scoring Guide: For each Step, use the Verification Criteria to assign a score for that Step: 2 = meets criteria; 0 = does not meet criteria.

Note: There is no score of 1 in the Provider Skill Performance Category.

Some Steps in the Provider Performance Category are so essential to the performance quality that they are considered "Score Limiting" Step(s). Given the importance of these particular Score Limiting Steps, if one of these Steps receives a score of 0, then the entire provider performance score must remain a 0.

The Score Limiting Steps for VIA are:

- Step 5: Provider correctly performs VIA, and
- Step 6: Provider correctly interprets VIA findings

The score obtained on the Score Limiting Step is the highest score that can be received for that Performance Standard. The scores on the other Steps cannot elevate the score above 0 if a score of 0 was obtained on the Score Limiting Step.

- Example 1 for VIA: If a provider scores a 0 on Step 6: Provider correctly interprets VIA findings, the provider's performance score cannot exceed 0 for this VIA skill, even if the provider scores 2 on other Steps, such as counselling and infection prevention.
- Example 2 for VIA: If a provider scores a 2 on both Step 5 and Step 6, the provider's performance score is simply the calculated average of all Steps observed.

PROVIDER SKILL PERFORMANCE STANDARD – VIA *Provider prepares for VIA, counsels, assesses, performs VIA competently, demonstrates good IPC practices, and documents findings.*					
VIA VERIFICATION CRITERIA: 10 STEPS	**VIA PERFORMANCE SCORE** *(P1 = Provider 1, P2 = Provider 2, etc.)*				**COMMENTS**
	P1 Score 2 or 0	P2 Score 2 or 0	P3 Score 2 or 0	P4 Score 2 or 0	
1. **Getting Ready**: Provider ensures that the room, all equipment, light source, and supplies are ready for use.					
2. **Pre-VIA Counselling and Assessment**: Provider greets the woman respectfully and: • Educates regarding cervical cancer and its prevention. • Takes targeted reproductive and medical history; assesses for risk factors. • Counsels her regarding how VIA and cryotherapy can prevent cervical cancer and obtains consent (verbal or written according to guidelines). • Evaluates her for any other services (e.g. family planning, HIV testing).					
3. **Infection Prevention and Control**: Performs hand hygiene, puts on new, clean examination gloves, and arranges instruments and supplies on a clean tray or container, if not already done.					
4. **Initial Examination**: Provider inspects external genitalia (for vulvar lesions, lichen sclerosis, and infectious disorders), gently performs pelvic examination, changes contaminated glove(s), performs speculum examination, visualizes the cervix well, accurately identifies the squamocolumnar junctions, and notes normal and abnormal findings prior to applying acetic acid.					
5. **SCORE LIMITING STEP – *Provider Correctly Performs VIA**: • Soaks a large clean cotton swab in 3–5% acetic acid, thoroughly washes the cervix, and disposes of the swab appropriately. • Waits at least 1 full minute (up to 2 minutes), by the clock, and observes the cervix the entire time for acetowhite changes.					
6. **SCORE LIMITING STEP – *Provider Correctly Interprets VIA Findings**: • VIA-negative, VIA-positive (and eligibility for cryotherapy), Suspicious for Cancer. See **Step 8** for discussing results. • If the VIA test was **Positive**, determines eligibility for cryotherapy. • A minimum of 20 images should be reviewed (actual clients, standardized stored photos, flashcards). Agreement should be at least 85%.					
7. **During VIA Infection Prevention and Control**: Throughout the procedure, provider places contaminated instruments in appropriate containers, disposes of contaminated materials properly, prevents cross-contamination of instrument tray, equipment, and supplies. If it does occur, it is recognized and proper disinfection/decontamination/disposal occurs.					
8. **Counselling**: During and after VIA, provider properly discusses results in easy to understand language, ensures client understanding, encourages questions, and answers them respectfully: • If VIA-negative, tells her when to return for repeat screening. • If VIA-positive or suspect cancer, discusses what the result means, and recommended next steps. • After counselling, provides necessary treatment or refers as needed.					
9. **Post-VIA Infection Prevention and Control**: • Following VIA, the provider changes gloves and disposes of contaminated ones properly, wipes the examination table, other equipment/instruments if used (e.g. camera), and the light source (if contaminated) with 0.5% chlorine solution or alcohol. • Disposes of contaminated gloves properly. • Performs hand hygiene. • Process instruments properly. • Stores processed equipment and supplies properly.					
10.**Documentation**: Provider correctly documents findings on the appropriate data management forms.					
VIA: Individual Provider Skill Performance Score					
VIA: Average Provider Skill Performance Score *(P1+P2+P3+P4…PN)/N = Average Score*					

PERFORMANCE CATEGORY 1.2: PROVIDER SKILL – CRYOTHERAPY

Scoring Guide: For each Step, use the Verification Criteria to assign a score for that Step: 2 = meets criteria; 0 = does not meet criteria.

Note: There is no score of 1 in the Provider Skill Performance Category.

Some Steps in the Provider Performance are so essential to the performance quality that they are considered "Score Limiting" Step(s). Given the importance of these particular Score Limiting Steps, if one of these Steps receives a score of 0, then the entire provider performance score must remain a 0.

The Score Limiting Step for Cryotherapy is:

- Step 4: Provider correctly performs cryotherapy

The score obtained on the Score Limiting Step is the highest score that can be received for that Performance Standard. The scores on the other Steps cannot elevate the score above 0 if a score of 0 was obtained on the Score Limiting Step.

- Example 1 for Cryotherapy: If a provider scores a 0 on Step 4: Provider correctly performs Cryotherapy, the provider's performance score cannot exceed 0 for this skill, even if the provider scores 2 on other Steps, such as counselling and infection prevention.

- Example 2 for Cryotherapy: If a provider scores a 2 on Step 4, the provider's performance score is simply the calculated average of all Steps observed.

PROVIDER SKILL PERFORMANCE STANDARD – CRYOTHERAPY
Provider prepares for cryotherapy, counsels, assesses, performs cryotherapy competently, demonstrates good IPC practices, and documents findings and treatment.

CRYOTHERAPY VERIFICATION CRITERIA: 8 STEPS	CRYOTHERAPY PERFORMANCE SCORE *(P1 = Provider 1, P2 = Provider 2, etc.)*				COMMENTS
	P1 Score 2 or 0	P2 Score 2 or 0	P3 Score 2 or 0	P4 Score 2 or 0	
1. **Getting Ready**: Provider ensures that in addition to VIA equipment and supplies, cryotherapy equipment, gas, and other supplies are functioning properly and ready for use, including sterilized or high-level disinfected cryotherapy tips.					
2. Pre-Cryotherapy Counselling and Assessment: Provider explains to the woman (and companion if present) why the treatment is recommended and describes the procedure: • Reviews previous counselling of cryotherapy, if done earlier, including: safety, effectiveness, risks of the procedure; what to expect during the procedure, what to expect following the procedure, self-care following the procedure, warning signs, and when she should return. • If not already done, ensures that the woman is not pregnant. • Answers all questions she has, and obtains consent (verbal or written according to guidelines). • Ensures the woman has recently (30 minutes) emptied her bladder.					
3. **Pre-Cryotherapy Infection Prevention and Control**: If not already done, performs hand hygiene, puts on new, clean examination gloves, and arranges instruments and supplies on a clean tray or container, if not already done.					
4. **SCORE LIMITING STEP – *Provider Correctly Performs Cryotherapy**: • Applies the cryotip to the cervix ensuring the entire acetowhite lesion is covered by the cryotip. • Performs the double-freeze technique. Freezes the cervix for 3 minutes and ensure a 4–5 mm ice ball forms, defrosts/thaws for 5 minutes, and refreezes for 3 minutes. • After the second freeze and the cryotip is detached, inspects the cervix to ensure that a hard, white frozen ice ball is present.					
5. **During Cryotherapy Infection Prevention and Control**: Throughout the procedure, provider places contaminated instruments in appropriate containers, disposes of contaminated materials properly, prevents cross-contamination of instrument tray, equipment, and supplies. If it does occur, it is recognized and proper disinfection/ decontamination/disposal occurs.					

Table continued

CRYOTHERAPY VERIFICATION CRITERIA: 8 STEPS	CRYOTHERAPY PERFORMANCE SCORE *(P1 = Provider 1, P2 = Provider 2, etc.)*				COMMENTS
	P1 Score 2 or 0	P2 Score 2 or 0	P3 Score 2 or 0	P4 Score 2 or 0	
6. **Counselling**: During and after cryotherapy: • Provider properly discusses what is happening and ensures that client is tolerating the procedure well. • Following the procedure, ensures the woman is not having excessive cramping before helping her sit up, get down from table, and get dressed. • Reviews post-cryotherapy and follow-up instructions (including written instructions if applicable). Asks her how she feels before allowing her to leave.					
7. **Post-Cryotherapy Infection Prevention and Control**: • Following cryotherapy, the provider changes gloves and disposes of contaminated ones properly, and closes the master valve on the gas cylinder. • Cleans and disinfects the cryotherapy unit by wiping it down with 70–90% ethyl or isopropyl alcohol, removes the cryotip, and empties the gas from the line. • Processes (sterilization or HLD) the cryotip according to manufacturer's instructions and stores in a sterile or HLD container. • Wipes the examination table, other equipment/instruments if used (e.g. camera), and the light source (if contaminated) with 0.5% chlorine solution or alcohol. • Disposes of contaminated gloves properly. • Performs hand hygiene. • Process remaining instruments properly. • Stores processed equipment and supplies properly.					
8. **Documentation**: Provider correctly documents findings on the appropriate data management forms.					
Cryotherapy: Individual Provider Skill Performance Score					
Cryotherapy: Average Provider Skill Performance Score *(P1+P2+P3+P4…PN)/N = Average Score*					

PERFORMANCE CATEGORY 1.3: PROVIDER SKILL – LEEP

Scoring Guide: For each Step, use the Verification Criteria to assign a score for that Step: 2 = meets criteria; 0 = does not meet criteria.

Note: There is no score of 1 in the Provider Skill Performance Category.

Some Steps in the Provider Performance are so essential to the performance quality that they are considered "Score Limiting" Step(s). Given the importance of these particular Score Limiting Steps, if one of these Steps receives a score of 0, then the entire provider performance score must remain a 0.

The Score Limiting Steps for LEEP are:

- Step 5: Provider correctly excises the lesion(s), and
- Step 6: Provider correctly achieves hemostasis

The score obtained on the Score Limiting Step is the highest score that can be received for that Performance Standard. The scores on the other Steps cannot elevate the score above 0 if a score of 0 was obtained on the Score Limiting Step.

- Example 1 for LEEP: If a provider scores a 0 on Step 5: Provider correctly excises the lesion(s), the provider's performance score cannot exceed 0 for this skill, even if the provider scores 2 on other Steps, such as counselling and infection prevention.
- Example 2 for LEEP: If a provider scores a 2 on both Step 5 and Step 6, the provider's performance score is simply the calculated average of all Steps observed.

PROVIDER SKILL PERFORMANCE STANDARD – LEEP *Provider prepares for LEEP, counsels, assesses, performs LEEP competently, demonstrates good IPC practices, and documents findings and treatment.*					
LEEP VERIFICATION CRITERIA: 10 STEPS	**LEEP PERFORMANCE SCORE** *(P1 = Provider 1, P2 = Provider 2, etc.)*				**COMMENTS**
	P1 Score 2 or 0	P2 Score 2 or 0	P3 Score 2 or 0	P4 Score 2 or 0	
1. **Getting Ready**: Provider ensures that LEEP equipment, instruments, supplies, light source, and electrical power are functional, available, and ready for use, including sterilized loop and ball electrodes.					
2. Pre-LEEP Counselling and Assessment: Provider greets the woman respectfully and: • Takes a targeted reproductive and medical history. Assesses for risk factors to treatment, and ensures no contraindications exist for treatment. • Takes and records blood pressure and pulse. • Based on the above steps, decides if it is safe to proceed with LEEP and if any change in type of local anaesthetic is needed. • Explains why the treatment is recommended and describes LEEP, including what to expect following treatment. • Answers all questions she has, and obtains consent (verbal or written according to guidelines). • Ensures the woman has recently (30 minutes) emptied her bladder.					
3. **Pre-LEEP Infection Prevention and Control**: If not already done, performs hand hygiene, puts on sterile surgical gloves, and arranges instruments and supplies on a sterile field.					
4. **Preparing to Perform LEEP**: • Attaches dispersive (grounding) pad to the woman's thigh. • Puts on a new pair of sterile surgical gloves on hands and arrange instruments and supplies on sterile tray, kidney dish, or towel on the trolley, if not already done. • Connects suction tubing to LEEP speculum. • Gently inserts LEEP speculum and fixes blades in the open position, as wide as possible without creating discomfort. Ensures adequate exposure protection of vaginal walls. • Repeats VIA, VILI, or colposcopy. Determines size loop(s) needed, anticipated number of passes, and ensures that loops and ball electrodes are ready on the table.					

Table continued

LEEP VERIFICATION CRITERIA: 10 STEPS	LEEP PERFORMANCE SCORE *(P1 = Provider 1, P2 = Provider 2, etc.)*				COMMENTS
	P1 Score 2 or 0	P2 Score 2 or 0	P3 Score 2 or 0	P4 Score 2 or 0	
5. **SCORE LIMITING STEP – *Provider Correctly Excises the Lesion(s)**: • Establishes local anaesthesia (total 3–4 mL) with appropriate local anaesthetic. • Inserts appropriate-sized loop in electrosurgery pen and sets on blended cutting at appropriate power. • Orients loop correctly, activates the electrode and introduces the loop into the tissue providing directional guidance. Excises 5 mm outside outer boundary of lesion and to a depth of at least 5 mm, ensuring entire excision of the precancerous lesion(s) and the transformation zone. Maintains activation of loop until loop exits the cervix tissue. • Removes specimen(s) with long tissue forceps and place in appropriately marked specimen containers with formalin.					
6. **SCORE LIMITING STEP – *Provider Correctly Achieves Hemostasis and Completes the Procedure**: • Changes LEEP unit setting to coagulation and insert 5 mm ball electrode into electrosurgery pen and coagulates the excisional crater until adequate hemostasis is achieved. • Coats the base of the excisional crater with Monsel's solution or paste					
7. **Infection Prevention and Control**: Throughout the procedure and after, provider places contaminated instruments in appropriate containers, disposes of sharps properly, disposes of contaminated materials properly, and prevents cross-contamination of instrument tray, equipment, and supplies. If it does occur, it is recognized and proper disinfection/decontamination/disposal occurs.					
8. **Counselling**: During and after LEEP: • Provider properly discusses what is happening and ensures that client is tolerating the procedure well. • Following the procedure, ensures the woman is not having excessive bleeding or cramping before helping her sit up, get down from table, and get dressed, and before she leaves the clinic. • Reviews post-LEEP and follow-up instructions (including written instructions if applicable), and next appointment.					
9. **Post-LEEP Infection Prevention and Control**: • Following LEEP, the provider changes gloves and disposes of them properly, and puts on new clean examination gloves. • Wipes suction tubing, electrosurgery pen, and light source with alcohol or 0.5% chlorine solution. Wipes the examination table or Macintosh cloth, and other contaminated surfaces, with alcohol or 0.5% chlorine solution. • Removes gloves, disposes of them properly, and performs hand hygiene. • Gently cleans and sterilizes loop and ball electrodes; stores in sterile containers. Cleans and either HLD or sterilize LEEP speculum and other instruments; stores in HLD or sterile containers.					
10.**Documentation**: Provider correctly documents findings in the appropriate data management forms.					
LEEP: Individual Provider Skill Performance Score					
Cryotherapy: Average Provider Skill Performance Score *(P1+P2+P3+P4...PN)/N = Average Score*					

SUMMARY OF PERFORMANCE CATEGORIES 1.1-1.3:
INDIVIDUAL PROVIDER SKILL PERFORMANCE SCORES FOR EACH SKILL

Use this table to summarize the individual provider scores from 1.1 – 1.3 and calculate the Average Performance Score by Skill.

PROVIDER NAME	SKILL(S) ASSESSED AND PERFORMANCE SCORE			Average Performance Score by Individual Provider *(Calculated average for all skills assessed for each Provider)*	COMMENTS
	VIA Score	Cryotherapy Score	LEEP Score		
P1.					
P2.					
P3.					
P4.					
Average Performance Score by Skill *(P1+P2+P3+P4... PN)/N = Average Score*				*Transfer the **Average Performance Score by Skill** to the next table*	

SUMMARY OF PERFORMANCE CATEGORIES 1.1–1.3:
AVERAGE PROVIDER SKILL PERFORMANCE SCORE FOR EACH SKILL

Note: The numbers in this table will be entered into the dashboard.

SKILL	PERFORMANCE SCORE *Transfer the Average Performance Score by Skill from the previous table*	PERFORMANCE COLOUR STATUS *(PLACE AN "X" IN THE APPROPRIATE BOX)*			COMMENTS *Briefly summarize the reason for any Yellow or Red results*
		1.8–2.0 (Green)	1.0-1.7 (Yellow)	0.0-0.9 (Red).	
VIA					
Cryotherapy					
LEEP					

PERFORMANCE CATEGORY 2: DATA QUALITY AND USE

DATA AUDIT TABLE

Use this table to document the conduct of a data audit as part of assessing the Data Quality and Use performance category.

Data reported to the national or subnational level can be transferred to this table (enter in Value Reported column) from a completed Pre-visit Worksheet.

Review of facility records (client forms, registers/ logbooks, monthly summary forms, and/or electronic systems) will allow for abstraction of key indicator data (enter in Value Observed column).

It is preferable to review data from at least 1 month; however, review of the previous 3 months is recommended for more accurate representation. Indicate the time period reviewed and note any issues with data access, availability or quality (*Completeness, Validity, Consistency, Accuracy, Uniqueness, Timeliness*).

Observation, and discussion with facility data management staff and providers, will further inform assessment of Performance Category 2.1 and 2.2.

INDICATOR DATA REVIEW QUESTIONS *Questions should be adapted to match core indicators being monitored*	**VALUE OBSERVED/ CALCULATED AT FACILITY**	**VALUE REPORTED**	**TIME PERIOD REVIEWED** *List Dates*	**COMMENTS**
What is the monthly screening target at this facility?				
Over the past 3 months, how many clients have been screened?				
For countries with high HIV-prevalence: Over the past 3 months, how many clients screened have been HIV-positive?				
In the past 3 months, what is the proportion of women screened for the first time *within* the target age range?				
Over the past 3 months, what is the screening test positivity rate for women screened for the first time?				

PERFORMANCE CATEGORY 2.1:
DATA QUALITY AND USE – DATA COLLECTION AND MANAGEMENT

Scoring Guide: 2 = confidentiality is consistently maintained, data collection materials are consistently available, almost no issues with data quality; 1 = some improvement is needed in maintaining confidentiality, data collection materials are not consistently available, some improvement is needed in data quality; 0 = large improvement is needed in maintaining confidentiality, large improvement is needed in availability of data collection materials, large improvement is needed in data quality

NOTE: The information in the Data Audit Table above, along with observation and discussion with facility staff, should be used to assess the standard items for this category.

DATA QUALITY AND USE PERFORMANCE STANDARD – DATA COLLECTION AND MANAGEMENT *Data are collected, recorded, and stored properly.*		
5 Items	**Score 0–2**	**Comments**
1. Confidentiality of client information is protected. Forms with client information are not left in the open. Forms are neatly in files. Along with the logbook, forms are stored in a secure area, with limited access to only authorized personnel.		
2. There are adequate supplies of the forms and the latest versions are in use.		
3. Client level forms are complete, with key information entered correctly in a consistent format, and match the register/logbook entries for all clients for the selected time period. (*Completeness, Validity, Consistency, Accuracy, Uniqueness, Timeliness*)		
4. Register/logbooks are complete, with key information entered correctly in a consistent format, and without unintended duplication (*Completeness, Validity, Consistency, Uniqueness*); and are up to date, with totals that match monthly summary form (*Timeliness, Accuracy*)		
5. Monthly summary form at facility is correctly completed (*Completeness, Validity, Consistency*), and matches data reported to, and available at, national/subnational level. (*Timeliness, Accuracy*)		
DATA COLLECTION AND MANAGEMENT Performance Score *(Calculated average of the scores)*		

PERFORMANCE CATEGORY 2.2:
DATA QUALITY AND USE – KEY INDICATORS AND BENCHMARKS

Scoring Guide: located within each individual item.

Note: The information in the Data Audit Table, along with observation and discussion with facility staff, should be used to assess the standard items for this category.

The Key Indicators and Benchmarks standard items below overlap with criteria scored in Readiness Category 2: Service Utilization. The assessment team should cross reference items 2 and 5 with the criteria scores from assessment of Readiness Category 2.

DATA QUALITY AND USE PERFORMANCE STANDARD – KEY INDICATORS AND BENCHMARKS *Key indicators and targets are understood and benchmarks are met.*		
6 Items *Should be adapted to key nationally standardized indicators in use*	**Score 0–2**	**Comments**
1. Providers can describe what the key indicators and targets and benchmarks are for the facility. **Scoring Guide**: 2 = most or all providers can describe key indicators and targets; 1 = some providers can describe indicators, but lack knowledge on targets and benchmarks; 0 = general lack of capacity to describe indicators, targets and benchmarks.		
2. On average, the facility reached its monthly screening target over the past 3 months. **Scoring Guide**: 2 = ≥85% of target reached; 1 = 75–84%; 0 = ≤75% or >115%		
3. At least 70% of the women screened for the first time are within the target age range. **Scoring Guide**: 2 = ≥70%; 1 = 51–69%; 0 = ≤ 50%		
4. VIA-positivity rate is between 5–10% for new screening (if outside the range, there is a reasonable explanation). **Scoring Guide**: 2 = 5–10%; 1 = 3–4% or 10–19%; 0 = <3% or ≥20%		
5. At least 90% of screen-positive women receive treatment. **Scoring Guide:** 2 = ≥90%; 1 = 71–89%; 0 = ≤70%		
6. Data are being analysed, visualized, and used at the facility level (e.g. using Data Use Poster or facility has posted graphs or tables with current results). **Scoring Guide: 2** = consistently being done; 1 = being done but not consistently being done; 0 = never or almost never being done.		
KEY INDICATORS AND BENCHMARKS Performance Score *(Calculated average of the scores)*		

PERFORMANCE CATEGORY 3: CLIENT AND COMMUNITY ASSESSMENTS

Scoring Guide: 2 = perceptions of quality of care are routinely assessed, and perceptions of quality of care are high; 1 = perceptions of quality of care are assessed only occasionally, and/or perceptions of quality of care indicate a need for improvement; 0 = perceptions of quality of care are not assessed, and/or the perceptions indicate a lack of quality of care.

Sources of Information: Interview/s and direct observation

CLIENT AND COMMUNITY ASSESSMENTS PERFORMANCE STANDARD *Client and community assessments on their perceptions of quality of care provided are routinely conducted, and these perceptions of quality of care are high.*		
2 Items	**Score 0–2**	**Comments**
Client and community perceptions on quality of care are routinely assessed by (mark all that apply): ☐ Client interviews ☐ Suggestion box ☐ Meetings with community members or leaders ☐ Other (indicate) **Note**: The facility does not need to conduct all these assessment methods.		
If the facility assesses client and community perceptions of quality, what level of care do clients feel they receive?		
CLIENT AND COMMUNITY ASSESSMENTS Performance Score *(Calculated average of the scores)*		

READINESS CATEGORIES

Instructions: Assess each Category in this section by assigning a score (0, 1, or 2) to each item/criterion based on how well the facility meets the standard. A detailed scoring guide is included for each category to help determine the degree to which the facility meets the standard. The Readiness Score for each category is calculated by taking an average of the scores for all items/criterion within the category.

CATEGORY 1: SERVICES

Scoring Guide: 2 = providing the designated services on a regular and continuous basis; 1 = designated services are being provided, but some interruptions in services occur; 0 = designated services are not being provided. Do not score services that the facility is not designated to provide. Sources of Information: Pre-visit worksheet and interview(s).

Sources of Information: Pre-visit worksheet and interview(s)

STANDARD *Facility is providing the services it is designated to provide.*				
Service	**Designated to Provide Services** *(Place an "X" in the appropriate box.)*		**Score** *(0, 1, 2) Only provide a score if "YES" is marked in previous column.*	**Comments**
	No	**Yes**		
Cytology (sample collection)				
HPV Test (sample collection)				
HPV Test (processing)				
VIA				
VILI				
Cryotherapy				
Single Visit Approach				
LEEP				
Colposcopy				
Biopsy				
Endocervical Curettage				
Histology/Pathology				
SERVICES Readiness Score *(Calculated average of the scores)*				

CATEGORY 2: SERVICE UTILIZATION

Scoring Guide: Provided under each individual item

Sources of Information: Pre-visit worksheet and interview(s); Review facility data ahead of visit if possible.

STANDARD *In a facility where services are currently being provided, screening and treatment targets are met.*		
2 Items	**Score** *(0, 1, 2)*	**Comments**
Met monthly screening target over the past 3 months. Scoring Guide: 2 = ≥85% of target reached; 1 = 75–84% of target reached; 0 = ≤75% or >115% of target reached		
Over the past 3 months, of those patients with precancerous lesions screened at the facility, 90% or more received treatment (combination of same day and at a later visit). Scoring Guide: 2 = 90–100%; 1 = 71–89%; 0 = <70% or >100%		
SERVICE UTILIZATION Readiness Score *(Calculated average of the scores)*		

CATEGORY 3: STAFFING

Scoring Guide: 2 = sufficient number of trained providers are available and currently providing services to meet the need on a regular and continuous basis; 1 = insufficient number of trained providers are available and currently providing services to meet the need; 0 = no trained providers are available to provide the service.

Sources of Information: pre-visit worksheet (see staffing table in pre-visit worksheet) and interview(s)

STANDARD *Sufficient numbers of trained providers are currently providing services to meet need.*		
Service	**Score** *(0, 1, 2) Only provide a score for services the facility is designated to provide.*	**Comments**
Cytology (sample collection)		
HPV Test (sample collection)		
HPV Test (processing)		
VIA		
VILI		
Cryotherapy		
Single Visit Approach		
LEEP		
Colposcopy		
Biopsy		
Endocervical Curettage		
Histology/Pathology		
STAFFING Readiness Score *(Calculated average of the scores)*		

CATEGORY 4: POTENTIAL STAFFING

Scoring Guide: 2 = sufficient number of providers are available who meet the selection criteria to be trained and are available to provide services once trained; 1 = insufficient number of providers are available who meet the selection criteria to be trained; 0 = no providers are available who meet the selection criteria to be trained.

Sources of Information: pre-visit worksheet (see staffing table in pre-visit worksheet) and interview(s)

STANDARD *Sufficient number of providers are available who meet selection criteria to be trained in desired skill and are available to provide services once trained.*		
Service	**Score** *(0, 1, 2) Only provide a score for services the facility is designated to provide.*	**Comments**
Cytology (sample collection)		
HPV Test (sample collection)		
HPV Test (processing)		
VIA		
VILI		
Cryotherapy		
Single Visit Approach		
LEEP		
Colposcopy		
Biopsy		
Endocervical Curettage		
Histology/Pathology		
POTENTIAL STAFFING Readiness Score *(Calculated average of the scores)*		

CATEGORY 5: INFRASTRUCTURE

Scoring Guide: 2 = item is present and functional on a regular and continuous basis; 1 = some interruptions in the presence and functioning of the item that affect quality of services; 0 = item is not present or is not functional.

Sources of Information: direct observation and interviews with appropriate staff.

STANDARD *Items are present and functional (include over the past 3 months).*		
7 Items	**Score** *(0, 1, 2)*	**Comments**
Physical layout and space: Functional, clean, and uncluttered private examination room (or large room with privacy screens)		
Handwashing area (sink with running water/bucket with spigot; soap)		
Washroom/bathroom for client use		
Reliable electrical power (Note: may be considered not essential for some services)		
Space for confidential counselling		
Communication equipment (e.g. phone)		
Storage space for instruments		
INFRASTRUCTURE Readiness Score *(Calculated average of the scores)*		

CATEGORY 6: PROCUREMENT AND SUPPLY CHAIN

Scoring Guide: 2 = over the past 3 months, the processes or activities occurred without interruption; 1 = over the past 3 months, the processes or activities occurred but with some interruptions; 0 = over the past 3 months, the processes or activities did not occur.

Sources of Information: interview(s) with facility manager or relevant staff member.

STANDARD *A functional procurement and supply chain system is in place, as defined by the 4 items below.*		
4 Items	**Score** *(0, 1, 2)*	**Comments**
Regular assessment of equipment and supply levels		
Prevention and management of stock out		
Supplies (including cryotherapy gas) arrive in a predictable amount of time when ordered		
Reordering of supplies is routine (e.g. incorporated in regular workflow with designated roles and ordering schedules)		
PROCUREMENT AND SUPPLY CHAIN Readiness Score *(Calculated average of the scores)*		

CATEGORY 7: EQUIPMENT AND SUPPLIES

Scoring Guide: 2 = item is present and functional on a regular and continuous basis; 1 = some interruptions in the presence and functioning of the item that affect quality of services; 0 = item is not present or is not functional.

Note: If the facility provides services not listed below (e.g. HPV testing, cytology, LEEP), adapt the tool by adding or deleting service-specific equipment and supplies. (See Minimum Requirement Lists for Equipment, Supplies, and Commodities).

Sources of Information: direct observation and interviews with appropriate staff.

STANDARD *Items are of sufficient quantity, continuously available, and functional (include over the past 3 months).*		
Items	**Score** *(0, 1, 2)*	**Comments**
VIA EQUIPMENT AND SUPPLIES (10 Items) *See **Minimum Requirement Lists for Equipment, Supplies, and Commodities** for details of suggested minimum quantities for VIA.*		
Examination tables		
Instrument trays/trolleys or similar surfaces		
Metal specula (in the screening clinic)		
Sponge/ring forceps or wooden orange or kebab sticks		
Gallipots/other small dishes		
Clean examination gloves		
Bright white light source		
Clock/watch/timer		
Clean cotton balls/cotton swabs – large		
3–5% acetic acid		
VIA EQUIPMENT AND SUPPLIES Readiness Score (calculated average of the scores)		
CRYOTHERAPY EQUIPMENT AND SUPPLIES (4 Items) *See **Minimum Requirement Lists for Equipment, Supplies, and Commodities**, for details of suggested minimum quantities for Cryotherapy.*		
Cryotherapy unit		
Cryotherapy tips		
Carbon dioxide or nitrous oxide gas tanks with appropriate fittings		
Carbon dioxide or nitrous oxide gas		
CRYOTHERAPY EQUIPMENT AND SUPPLIES Readiness Score *(Calculated average of the Cryotherapy scores)*		
EQUIPMENT AND SUPPLIES Readiness Score *(Calculated average of the VIA and Cryotherapy Equipment and Supplies Readiness Scores)*		

CATEGORY 8: INFECTION PREVENTION

Scoring Guide: 2 = item is present in sufficient quantity and functional on a regular and continuous basis; 1 = sometimes, item is missing, not in sufficient quantity, or not functional to the point that it affects quality of services; 0 = item is not present or is not functional.

Sources of Information: direct observation.

STANDARD *Items are continuously available and functional (include over the past 3 months).*		
7 Items	**Score** *(0, 1, 2)*	**Comments**
Liquid soap for hands or alcohol-based hand sanitizer		
Buckets for collection of contaminated instruments and for instrument processing		
0.5% chlorine solution		
Ability to sterilize and store properly (check the method(s) that apply): ☐ Functional autoclave, or ☐ 2–4% glutaraldehyde (including sterile water to rinse) *Note: Need only one of the above methods to meet the standard **AND** ☐ Containers to store sterilized instruments		
Ability to high-level disinfect (HLD) and store properly (check all that apply): ☐ Pressure cooker for steam-based high-level disinfection ☐ Sufficient gas to run pressure cooker burner ☐ 2–4% glutaraldehyde (including sterile or boiled water to rinse) ☐ 70–90% ethyl or isopropyl alcohol (for cryotherapy tips only) *Note: Need only one of the above methods to meet the standard **AND** ☐ Containers to store HLD instruments		
Normal and hazardous waste bags and baskets		
Ability to properly dispose of hazardous wastes (e.g. incinerator or burial pit)		
INFECTION PREVENTION Readiness Score *(Calculated average of the scores)*		

CATEGORY 9: MEDICINES AND TESTING

Scoring Guide: 2 = medicines or test kits are continuously available, are stored properly and are not past expiration date; 1 = some medicines and test kits are not always available, stored properly and/or are past expiration date; 0 = medicines and test kits are not available, are stored improperly, and/or are past expiration date.

Sources of Information: interviews (including pharmacist), direct observation.

STANDARD *Items are continuously available and accessible.*		
4 Items	**Score** *(0, 1, 2)*	**Comments**
Pain relief medicines (e.g. Panadol, Ibuprofen, other)		
Antibiotics for treatment of cervicitis and sexually transmitted infections (STIs) per national guidelines		
HPV specimen collection tubes and/or test kits and cartridges (e.g. GeneXpert)		
HIV test kits		
Pregnancy testing		
MEDICINES AND TESTING Readiness Score *(Calculated average of the scores)*		

CATEGORY 10: DATA MANAGEMENT

Scoring Guide: 2 = data management materials and processes are continuously available and functional; 1 = some gaps exist in data management materials and processes; 0 = large gaps exist in data management materials and processes.

Sources of Information: direct observation and interviews with appropriate staff.

STANDARD *Items (materials and processes) are continuously available and functional (include over the past 3 months).*		
5 Items	**Score** *(0, 1, 2)*	**Comments**
Latest version of blank client screening/treatment forms (if used) and monthly summary forms available		
Latest version of the register or logbooks available		
Data management/storage ensures privacy of client information		
Health management information system (HMIS) for reporting cervical cancer screening and treatment data accessible to providers for data entry and/or reviewing results		
Designated staff and schedule to ensure reporting data		
DATA MANAGEMENT Readiness Score *(Calculated average of the scores)*		

CATEGORY 11: REFERRAL MECHANISMS

Scoring Guide: 2 = referral materials and processes are clearly defined and functional; 1 = some gaps exist in referral materials and processes; 0 = large gaps exist in referral materials and processes.

Sources of Information: direct observation and interviews with appropriate staff.

STANDARD *Referral mechanisms are clearly defined and functional.*		
6 Items	**Score** *(0, 1, 2)*	**Comments**
Referral sites for the facility are identified.		
Referral guidelines are available.		
Referral forms are readily available.		
Referral mechanisms are described (flow of information and how results are obtained by client and referring provider/facility).		
Results of the referrals are documented.		
Facility staff assess and attempt to address barriers to referral.		
REFERRAL MECHANISMS Readiness Score *(Calculated average of the scores)*		

CATEGORY 12: POLICIES AND GUIDELINES

Scoring Guide: 2 = current national guidelines are displayed and/or understood; 1 = some gaps exist in displaying and/or understanding current national guidelines; 0 = current national guidelines are not displayed nor understood.

Sources of Information: direct observation and interviews with appropriate staff

STANDARD *Relevant and current national guidelines and policies are displayed or readily available, and well understood.*		
2 Items	**Score** *(0, 1, 2)*	**Comments**
Relevant and current national guidelines and policies are displayed or readily available in a proper binder or folder (e.g. national cervical cancer prevention and control programme guidelines; other policies and guidelines related to screening and treatment offered at the facility; infection prevention and control (IPC) guidelines).		
Providers can describe key points of national guidelines and policies (e.g. ask probing questions regarding target age group for screening, frequency of screening).		
POLICIES AND GUIDELINES Readiness Score *(Calculated average of the scores)*		

CATEGORY 13: COMMUNITY SENSITIZATION AND MOBILIZATION

Scoring Guide: 2 = a number of different activities and materials are used regularly and are of high quality (e.g. current up-to-date information that is clearly presented); 1 = few activities and materials are used only occasionally and/or are of moderate quality;
0 = activities and materials are rarely used, if ever, and/or are of poor quality.

Sources of Information: direct observation and interviews with appropriate staff

STANDARD *In the past 3 months, the following activities have been continuously conducted and material present.*		
2 Items	**Score** *(0, 1, 2)*	**Comments**
Activities: The facility uses various approaches to raise awareness in women and the community about cervical cancer and its prevention. Examples include the following (check all that apply): ☐ TV (e.g. videos displayed in facility waiting areas); ☐ Radio (e.g. messages advertising services or upcoming campaigns); ☐ Public address systems (e.g. at markets, in the community); ☐ mHealth/text messages; ☐ Group education on-site; ☐ Other – describe **Note**: Not all of these activities need to be present.		
Information, Education and Communication (IEC) Materials: examples include messages about cervical cancer and its prevention using the following (check all that apply): ☐ Posters in the facility; ☐ Pamphlets/brochures; ☐ Posters in the community; ☐ Other – describe **Note**: Not all of these materials need to be present.		
COMMUNITY SENSITIZATION AND MOBILIZATION Readiness Score *(Calculated average of the scores)*		

ACTION PLAN

Instructions: Document any gaps identified during the scoring of categories above, and transfer relevant notes from the comments section to the Action Plan below. Leave a copy of the table below with facility staff upon completion of the Supportive Supervision or Facility Readiness Assessment Visit. It is important to differentiate between gaps and issues that could potentially be addressed by actions at the facility level (e.g. display/ understanding of national policies and guidelines; problems with supply delivery due to inconsistent ordering, etc.) from gaps and issues that may require actions initiated above the facility level (e.g. insufficient staff numbers; problems with supply delivery due to issues with procurement at national/central level, etc.).

Gaps (red or yellow status)	Proposed Intervention (step-by-step)	Resources Needed	Person Responsible	Due Date

STANDALONE FACILITY READINESS ASSESSMENT

This information is intended to guide the use of Readiness Categories in the Supportive Supervision tool to assess cervical cancer service availability at a facility, and the readiness of that facility to provide quality cervical cancer services. This standalone assessment may be implemented across all facilities at the national level, or all facilities in a subnational area, in order to inform a baseline during planning for scale-up or introduction of services; it is intended to be a practical, purpose-driven descriptive needs assessment, and is not intended to be conducted on a representative sample of facilities. The standalone assessment may also be implemented after planning stages at facilities designated to introduce services in order to ensure facility readiness at the outset of service scale-up/introduction, in addition to documenting baseline for future evaluation and monitoring of scale-up/introduction. Using the standalone assessment to inform planning and establish baseline allows monitoring of scale-up/ introduction through periodic routine Supportive Supervision visits using the Supportive Supervision tool – which gathers the information necessary to track service availability, facility readiness, and service quality.

PLANNING THE FACILITY READINESS ASSESSMENT VISIT

The Pre-Visit Checklist and Worksheet tools (in "Planning Materials") help to plan the visit and ensure pertinent information is gathered prior to verification during the visit. The assessment visit should be arranged without adding a burden to the staff. The core of the assessment occurs during the facility visit, which should be completed in one day. An assessment team leader (or survey coordinator, depending on methodology) should be designated to manage the overall planning of the visit, organize how data will be collected, and designate who on the team will collect it. Prior to the visit, all assessment team members need to be familiar with national guidelines, accepted standards of care, and the assessment categories, standards, and scoring system.

CONDUCTING THE FACILITY READINESS ASSESSMENT VISIT

INBRIEF MEETING

The assessment visit should begin with a previously scheduled inbrief meeting with the medical director, administrators, senior matron, doctors, other health-care workers and support staff who are providing cervical cancer prevention services.

The objective of this meeting is to communicate the visit purpose, assessment methods and what will be required (e.g. walk-through of clinic space, inspection of equipment and supplies, interviews with clinic staff, review of data forms and logbooks, etc.), and the process for providing results and feedback (e.g. Action Plan development and discussion).

DATA COLLECTION AND ANALYSIS

Sources of Information: Categories are assessed based on data gathered through direct observation, review of records or logbooks, and interviews with relevant staff (e.g. health workers, pharmacists, laboratory technicians, and their supervisors/ managers). Information collected using the Pre-Visit Worksheet should be verified by direct observation during the visit.

Scoring of Individual Readiness Categories: Scoring of each of the Readiness Categories is based on the degree to which the standards for that Category are met. The scoring system is based on a 0–2 scale: 2 = meets the standard; 1 = moderate improvement is needed to meet the standard; 0 = major improvement is needed to meet the standard. The standards for each Category are composed of a set of items (or criteria) that are scored individually; a Scoring Guide (0–2 scale) accompanies each category. The Readiness Score for each Category is calculated by taking the mean of the individual item (or criteria) scores in that Category.

Summary of Facility Readiness: The Facility Readiness Summary dashboard provides a snapshot view of the facility's overall readiness to provide cervical cancer prevention services. This table collates the Readiness Scores for each category and translates them to a status colour using a green-yellow-red (or "traffic-light") coding system which highlights the level of readiness, and allows simple tracking of changes over time.

The Facility Readiness Summary Score is calculated by taking the mean of all Category Readiness Scores. The colour-coded dashboard presentation helps to visualize facility readiness, and is particularly useful for busy managers or ministry officials who are reviewing many reports. Standardized coding allows for quick comparison across facilities. Table 4.5 provides a step-by-step cross-walk of the scoring process.

Calculating Service Availability and Readiness Indicators: Data from individual facilities from the Pre-visit Worksheet (verified during the visit), and the Services and Staffing Categories may be aggregated after all facilities have been assessed in order to calculate service availability indicators (see Data Analysis and Aggregation Tools). The denominators for the service availability categories MUST represent the population in the catchment area being served by the facilities assessed. If this information is not available, the majority of indicators cannot be calculated – only basic service availability can be calculated (e.g. % of facilities in a defined area – such as district, province, and country – offering services) – see "Tool for Data Aggregation and Analysis: Service Availability, Facility Readiness and Performance". As noted in the guiding information for this section calculating valid nationally (or subnationally) representative statistics on Service Availability requires information from all facilities in the country (or subnational area).

CONCLUDING THE VISIT – RESULTS COMMUNICATION AND ACTION PLAN

Assessment Team Debrief: Immediately after completing the assessment, the assessment team should regroup to agree on the issues to be discussed during the debriefing of facility staff. The team should reach consensus on all scores and discuss the facility's strengths and weaknesses, and priority issues which need to be addressed. The team should complete the Facility Readiness Summary dashboard based on their discussion, and agree on how feedback will be provided on each category – as well as identify any gaps in the collected information which may influence final scoring and action plan development.

Low Readiness Scores (Red or Yellow) and other major issues should be transferred to the Action Plan table (see subsection Supportive Supervision). During the Facility Staff Debrief, the assessment team should work with the staff to develop a detailed action plan based on the issues identified, their impact on service quality, and the feasibility of proposed interventions to address them.

Facility Staff Debrief: The purpose of the Facility Staff Debrief is to review the findings, provide immediate feedback, and start planning corrective action as part of the quality improvement process. The same facility staff members who attended the inbrief meeting, should also attend the debrief meeting, if feasible.

During debrief, the assessment team should:

- Review the purpose of the visit and outline the agenda for the debrief.
- Ask the facility staff to provide a self-assessment—including the strengths and weaknesses they identified during the visit.
- Discuss the facility's strengths, pointing out where they agree with the facility self-assessment, and highlighting strengths the facility staff may not have mentioned.
- Discuss identified weaknesses and areas that need improvement, especially those that may compromise quality of services and health outcomes.
- Differentiate between problems that need to be addressed within the facility, and problems that have to be addressed outside the facility.
- Encourage feedback from the staff.

Following the debrief, a copy of the finalized Action Plan and Facility Readiness Summary dashboard should be provided to the medical director of the facility, national Ministry (or local) authorities, and other relevant partners.

TABLE 4.5
Scoring facility readiness

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
Score items within a **Category** based on how well they meet the standard *Scoring Scale:* *0, 1, 2*	Determine the **Category Readiness Score** by calculating the average of all items/criteria in a **Category** *Scoring Scale:* *0.0–2.0*	Input all the **Category Readiness Scores** into the **Facility Readiness Summary** and designate a status colour for each **Category**	Determine the **Facility Readiness Summary Score** by calculating the mean of all **Category Readiness Scores** *Scoring Scale: 0.0–2.0*	Designate a status colour for the **Facility Readiness Summary Score**
2 = Meets the Standard	1.8 to 2.0 = Meets the Standard	**Green**: 1.8 to 2.0 = Meets the Standard	1.8 to 2.0 = Meets the Standard	**Green**: 1.8 to 2.0 = Meets the Standard
1 = Some improvement is needed to meet the Standard	1.0 to 1.7 = Some improvement is needed to meet the Standard	**Yellow**: 1.0 to 1.7 = Some improvement is needed to meet the Standard	1.0 to 1.7 = Some improvement is needed to meet the Standard	**Yellow**: 1.0 to 1.7 = Some improvement is needed to meet the Standard
0 = Large improvement is needed to meet the Standard	0.0 to 0.9 = Large improvement is needed to meet the Standard	**Red**: 0.0 to 0.9 = Large improvement is needed to meet the Standard	0.0 to 0.9 = Large improvement is needed to meet the Standard	**Red**: 0.0 to 0.9 = Large improvement is needed to meet the Standard
Example: Scoring items in the Infrastructure category - *Physical Layout: **2*** *Handwashing area: **2*** *Washroom for client use: **1*** *...etc. for all items*	*Example: The Infrastructure category assesses 7 items; if the sum total of item scores is 12, the **Category Readiness Score is 12/7 = 1.7***	*Example: If the Category Readiness Score is 12/7 = 1.7, the **readiness status colour for the Category is Yellow***	*Example: If 13 Categories are assessed, and the sum of the Category Readiness Scores is 20, the **Facility Readiness Summary Score is 20/13 = 1.5***	*Example: If the Facility Readiness Summary Score is 20/13 = 1.5, the **readiness status colour for the facility is Yellow.***

FACILITY READINESS SUMMARY DASHBOARD

Instructions: Enter the Readiness Score for each Category below, and use an X to mark the corresponding readiness status colour. Calculate the Facility Readiness Summary Score, by adding all the Category Readiness Scores in the table below and dividing the sum by the total number of categories assessed. Use an X to mark the corresponding facility readiness status colour.

READINESS CATEGORY	SCORE	READINESS STATUS COLOUR *(Place an "X" in the appropriate box)*			COMMENTS
		1.8 to 2.0 (Green)	1.0 to 1.7 (Yellow)	0.0 to 0.9 (Red)	
1. Services					
2. Service Utilization					
3. Staffing					
4. Potential Staffing (if applicable)					
5. Infrastructure					
6. Procurement and Supply Chain					
7. Equipment and Supplies					
8. Infection Prevention					
9. Medicines and Testing					
10. Data Management					
11. Referral Mechanisms					
12. Policies and Guidelines					
13. Community Sensitization/Mobilization					
Facility Readiness Summary Score *(calculated average of the category Readiness Scores)*					

FACILITY READINESS ASSESSMENT AND SUPPORTIVE SUPERVISION PLANNING MATERIALS

PRE-VISIT CHECKLIST

☐ Supportive Supervision Visit
☐ Facility Readiness Assessment
Date of planned visit: _____

Activity	Checklist
Secure necessary approvals and permissions to conduct the visit.	☐ Provide the appropriate officials with details of and justification for the proposed visit. ☐ Secure written approval to conduct the visit.
Schedule visit and prepare visit team.	☐ Determine the amount of time the visit will take *(anticipate needing 1 day at the facility – may need longer depending on size/volume).* ☐ Consult with the staff of the facility to inform them of activities comprising the visit, and to establish an agreeable date for the visit. *Note: If conducting **Supportive Supervision, the visit must occur on a day when services are provided** in order to assess provider performance.* ☐ Ensure the **Facility Readiness** Assessment team consists of at least 2 people. **Names:** 1. _____ 2. _____ **OR** ☐ Ensure the **Supportive Supervision** team consists of a clinical trainer/supervisor and a monitoring and evaluation advisor. **Names:** 1. _____ 2. _____ ☐ Ensure that the schedule of the Assessment team is cleared for the visit. ☐ Ensure that all Assessment or Supportive Supervision team members have been trained on the tool and process
Review key reports and data.	☐ Review previous assessment and supportive supervision visit results. ☐ Review previous Action Plans: Priority Gaps and Proposed Interventions from the previous visit. ☐ Review data on key performance indicators from the **past 3 months** – including progress towards targets and benchmarks.
Ensure availability of all materials required.	☐ Print paper copies of *(or ensure readiness of electronic)* data collection tools: • Facility Readiness tool or Supportive Supervision tool and relevant summary score table (and equipment lists, if needed) • Completed pre-visit worksheets ☐ Print extra **PAPER copy** of relevant summary score table and Action Plan to leave with facility staff following visit debrief ☐ Print blank paper copies of current programme data collection and aggregation forms (e.g. client forms, registers, summary forms, etc.) and data management and benchmark tools *(or ensure electronic versions will be accessible during visit)* ☐ Print *(or ensure electronic accessibility to)* results and targets for key performance indicators from the past 3 months. ☐ Print paper copies of previous Facility Readiness Assessment or Supportive Supervision visit results - including summary scores and action plans *(or ensure electronic versions will be accessible during visit)*.

PRE-VISIT WORKSHEET

☐ Supportive Supervision Visit
☐ Facility Readiness Assessment

FACILITY INFORMATION	
Facility Name	
Facility Location	District: _____ City/Village: _____ GPS Waypoint: _____
Facility Catchment Population	
Number of women in target population for cervical cancer screening services	

What cervical cancer prevention services is this facility designated to provide? *(Mark all that apply)*

☐ **No services currently designated**
☐ HPV Test Sample Collection
☐ Biopsy
☐ Cytology Sample Collection
☐ LEEP
☐ VIA
☐ Endocervical Curettage
☐ VILI
☐ Cytology
☐ Cryotherapy
☐ HPV Test Processing
☐ Single Visit Approach
☐ Histology/Pathology
☐ Colposcopy
☐ Other:

Is there a plan to add cervical cancer prevention services to the facility (or campus)? *(Mark all that apply)*

☐ **No plan to add services**
☐ HPV Test Sample Collection
☐ Biopsy
☐ Cytology Sample Collection
☐ LEEP
☐ VIA
☐ Endocervical Curettage
☐ VILI
☐ Cytology
☐ Cryotherapy
☐ HPV Test Processing
☐ Single Visit Approach
☐ Histology/Pathology
☐ Colposcopy
☐ Other:

CURRENT FACILITY STAFFING LEVELS FOR CERVICAL CANCER PREVENTION SERVICES						
Skill	**Number of trained providers currently providing services**					**Comments**
	Nurses	**Midwives**	**Clinical Officers and Physicians**	**Other Cadre** *(note in comments)*	**Total Staff**	
HPV Test (Collection)						
Cytology (Collection)						
VIA						
VILI						
Cryotherapy						
Colposcopy						
Biopsy						
LEEP						
Endocervical Curettage						
Cytology (Processing)						
HPV Test (Processing)						
Histology/Pathology						
Other:						
TOTAL						

Complete the next table if the facility plans to expand services.

POTENTIAL STAFFING LEVELS FOR CERVICAL CANCER PREVENTION SERVICES						
Skill	**Number of providers who meet the selection criteria for training**					**Comments**
	Nurses	**Midwives**	**Clinical Officers and Physicians**	**Other Cadre** *(note in comments)*	**Total Staff**	
HPV Test (Collection)						
Cytology (Collection)						
VIA						
VILI						
Cryotherapy						
Colposcopy						
Biopsy						
LEEP						
Endocervical Curettage						
Cytology (Processing)						
HPV Test (Processing)						
Histology/Pathology						
Other:						
TOTAL						

PRE-VISIT REVIEW OF REPORTED FACILITY DATA

Time period covered by data review: _____
NOTE: It is recommended that the data review cover facility-specific data for key indicators over the previous 3 months.

Indicator *(should be adapted to key nationally standardized indicators in use)*	**Value**	**Target or Benchmark**	**Met Target or Benchmark**
Number of women screened for the first time within the target age range *over the past 3 months*			
Proportion of women screened for the first time *over the past 3 months* who were within the target age range			
Proportion of all women enrolled in HIV care and treatment who were reached with at least one screening *over the past 3 months*			
Screening test positivity rate *over the past 3 months*			
Single visit approach rate *over the past 3 months*			
Treatment rate *over past 3 months*			

SERVICE AVAILABILITY, FACILITY READINESS AND PERFORMANCE DATA AGGREGATION AND ANALYSIS TOOL

The purpose of this tool is to facilitate the systematic aggregation of cervical cancer service availability and facility readiness and performance data gathered through one of the following methods:

- Standalone, cervical cancer-specific Facility Readiness Assessment conducted in *all* public and private health-care facilities in the country, or a defined subnational area (i.e. facility census methodology).
- Standalone, cervical cancer-specific Facility Readiness Assessment conducted in a strategic (i.e. purposive), but *not nationally representative*, sample of facilities (public or private) in order to establish facility baselines or ensure operational facility readiness as a prerequisite to launching new services
- Assessment of cervical cancer-specific service availability, readiness, and quality in a strategic (i.e. purposive), but *not nationally representative*, sample of facilities as part of the Supportive Supervision process
- Assessment of cervical cancer-specific service availability, readiness, and quality as part of general health system and services surveillance through a *nationally representative* survey of facilities or *health facility census*

The tool guides the calculation of the indicators in Table 4.6 for the analyses of service availability, facility readiness and performance at the national or other aggregate level. These indicators are intended to assist national decision-makers, programme managers, and health administrators to plan, monitor, and improve cervical cancer prevention services. A geographic analysis of this information can inform service and equipment deployment planning, and help ensure equitable access and distribution of services and resource maximization. Depending on sampling methodology, the information gathered here may be used as inputs into the programme costing analysis and planning tool in Section 5 of this toolkit.

INDICATOR DATA SOURCES

The indicator data are intended to be primarily collected through assessment of the thirteen Readiness Categories (via standalone Facility Readiness Assessment, or as part of a Supportive Supervision visit) and three Performance Categories (as part of Supportive Supervision); however, additional data are required to calculate the Service Availability indicators. The additional sources of data for the Service Availability indicator denominators should be comprehensive and current, and may include: health facility census, master facility list, household surveys, community health information systems, population census, etc. This tool and indicators may also be used to support the review and analysis of cervical cancer-specific service availability, readiness and performance information collected from multiple surveys and other data sources – provided that potentially confounding variables, such as time period in which data were collected or sampling frame, are considered and controlled for as much as possible in order to maintain validity in this secondary analysis. If recently conducted, data on service availability may be abstracted from the findings of the data systems assessment (see Section 1 of the toolkit).

INDICATOR CALCULATION

Methods for indicator calculation, analysis and interpretation at the subnational and national level should be tied to sampling methods and how the information will be used – for example, if data were collected as part of the routine supportive supervision process, or a purposive sample, calculating the Service Availability indicator (Indicator SA1) using the total number of facilities in the country as the denominator does not produce a valid, meaningful measurement unless all facilities providing cervical cancer services are included in the numerator. Alternatively, when indicator data are gathered through a through a census of all health facilities in the country (or subnational unit), using the total number of facilities in the country (or subnational unit) as the denominator for SA1 produces a valid and meaningful measurement – because all facilities were assessed, all facilities providing cervical cancer services are presumed to be included in the numerator. Table 4.7 provides practical examples of how different denominators and sampling methods impact what indicators from each category are measuring.

Note on data quality: In countries where service providers are rotated between facilities, care must be taken to ensure de-duplication when staffing data are aggregated. This can be addressed by incorporating additional data elements to identify those rotating providers, and the names of facilities through which they rotate.

CONSIDERATIONS FOR INCORPORATING CERVICAL CANCER INTO EXISTING SURVEYS

Globally established non-disease specific facility surveys, such as SARA or SPA, are conducted by many countries on a routine basis; however, it may not be feasible or appropriate to collect the information necessary to calculate the full set of indicators through these large-

scale surveys. Table 4.6 therefore presents a smaller set of tracer indicators that can be considered in order to leverage these broader surveys for cervical cancer. To support monitoring of trends, Table 4.6 maps the *tracer indicators* to the availability, readiness and quality indicators and the relevant supportive supervision tool category. Because assessing the presence of *all* equipment, supplies, and medicines necessary to provide services (see Minimum Requirement Lists for Equipment, Supplies, and Commodities) may not be feasible in broader facility surveys, a set of *tracer items* has been suggested for incorporation. These *tracer items* reflect those most commonly affecting the capacity of a facility to provide services through stockouts or lack of functionality and should be adapted to context. It is important to note that when assessing a facility through the supportive supervision or standalone readiness assessment process, all items within a category should be assessed against the standard; only the full set of items represents the minimum necessary to provide quality services.

ADAPTATION OF THE TOOL AND INDICATORS

Additional data elements may be included in collection to enable further disaggregation (breakdown) of the information for analysis by: screening and treatment service types; health facility level or type (e.g. primary care, tertiary care or health post, referral hospital); facility management or ownership (e.g. public, private, NGO, etc.); frequency of service provision (e.g. full-time, 1–2 days per week, etc.); or other categories relevant to national or programme priorities.

This tool currently captures information regarding cervical cancer screening, precancerous lesion treatment, and precancer/cancer diagnostics. When planning service scale-up or introduction of screening services, it is vital to understand the availability and geographic distribution of services for the treatment of invasive cancer and for palliative care. In many countries these advanced care services are only provided at very limited number of tertiary care facilities. Where advanced care services are provided at numerous facilities, or where documenting the limited availability of invasive cancer services is valuable for advocacy or planning, the tool should be adapted to include relevant data elements. Depending on programme context, items such as radiotherapy and surgery equipment, medications for chemotherapy and palliative care, and trained staff available to provide these services, should be added to the basic lists of items and standards within relevant categories.

TABLE 4.6
Indicators for service availability, facility readiness, and service quality

Supportive Supervision or Facility Readiness Assessment Category	**Indicator** SA = Service Availability FR = Facility Readiness SQ = Service Quality	**Tracer Indicator** TSA = Service Availability* TFR = Facility Readiness* TSQ = Service Quality
Readiness Category 1: Services	SA1. Service Availability: % of facilities providing cervical cancer services SA2. Facility Density: Number of facilities providing cervical cancer services per 5 000 female population, if number in target population is unknown SA2.1. Mobile Unit Density: Number of facilities providing cervical cancer services per 5 000 female population, if number in target population is unknown FR1. % of facilities providing the services they are designated to provide**	TSA1. Service Availability: % of facilities providing cervical cancer services TSA2. Facility Density: Number of facilities providing cervical cancer services per 5 000 female population, if number in target population is unknown
Readiness Category 2: Service Utilization	FR2. % of facilities meeting screening and treatment service targets***	TSA3. Service Utilization: Number of outpatient visits (e.g. screening, cryotherapy, etc.) per capita per year
Readiness Category 3: Staffing	FR3. % of facilities with sufficient number of trained staff providing services SA3. Health-care Worker Density: Number of trained health workers providing cervical cancer screening services per 5 000 female target population, compared to a benchmark.	TFR1. % of facilities with at least 1 trained staff member providing cervical cancer services TSA4. Health-care Worker Density: Number of trained health workers providing cervical cancer screening services per 5 000 female target population, compared to a benchmark.
Readiness Category 4: Potential Staffing	FR4. % of facilities with sufficient number of staff who meet selection criteria to be trained in desired skill and are available to provide services once trained	
Readiness Category 5: Infrastructure	FR5. % of facilities with the basic infrastructure to provide services	TFR2. % of facilities with the infrastructure to provide basic general health services
Readiness Category 6: Procurement and Supply Chain	FR6. % of facilities with a functional procurement and supply chain system	
Readiness Category 7: Equipment and Supplies	FR7. % of facilities where the minimum equipment and supplies necessary to provide services are continuously available and functional	TFR3. % of facilities with all minimum items (or tracer items) present on the day of the assessment
Readiness Category 8: Infection Prevention	FR8. % of facilities where the minimum equipment and supplies required for infection prevention are continuously available and functional	TFR4. % of facilities (providing cervical cancer services) with infection prevention and control mechanisms to provide basic general health services
Readiness Category 9: Medicines and Testing	FR9. % of facilities where basic medicines and test kits are continuously available	TFR5. % of facilities (providing cervical cancer services) with all minimum items (or tracer items) present on the day of the assessment
Readiness Category 10: Data Management	FR10. % of facilities with basic data management materials and processes in place	
Readiness Category 11: Referral Mechanisms	FR11. % of facilities with clearly defined, functional referral mechanisms	
Readiness Category 12: Policies and Guidelines	FR12. % of facilities where relevant, current national policies and guidelines are readily available and widely understood	TFR6. % of facilities with relevant national guidelines readily available
Readiness Category 13: Community Sensitization and Mobilization	FR13. % of facilities conducting awareness generation and education activities in the past 3 months, using a variety of up-to-date materials	
Categories assessed only by Supportive Supervision		
Performance Category 1: Provider Skill	SQ1. % of facilities with provider compliance to clinical skill performance standards	TSQ1. % of facilities with provider compliance to clinical skill performance standards
Performance Category 2.1: Data Collection and Management	SQ2.1. % of facilities complying with standards for the collection and management of quality data	TSQ2. % of facilities complying with standards for the collection and management of quality data

Table 4.6 continued

Performance Category 2.2: Key Indicators and Benchmarks	SQ2.2. % of facilities where key indicators and targets are understood, and benchmarks are met	
Performance Category 3: Client and Community Assessments	SQ3. % of facilities complying with the performance standard for client and community assessment of the quality of cervical cancer prevention services	

* Indicators modelled after SARA indicators.[1]
** Also see, Section 3, Patient and Programme Monitoring optional programme indicators.
*** Supports assessment of access to, and utilization of, services through review and analysis of key indicator data.

TABLE 4.7
Example indicator denominator calculations and validity under different conditions

INDICATOR	EXAMPLE		PURPOSIVE SAMPLE OR ROUTINE DATA (e.g. Supportive Supervision)	CENSUS
SA1. % of facilities providing cervical cancer services	NUM	# of facilities providing cervical cancer services		
	DEN A	Total # of facilities in the country*	CONDITIONAL: Valid if all facilities designated to provide cervical cancer services are assessed	YES
	DEN B	Total # of facilities designated to provide cervical cancer services	NO	NO
	DEN C	Total # of facilities assessed**	NO	YES
FR1. % of facilities providing the cervical cancer services they are designated to provide	NUM	# of facilities providing the cervical cancer services they are designated to provide		
	DEN A	Total # of facilities in the country*	NO	NO
	DEN B	Total # of facilities designated to provide cervical cancer services	CONDITIONAL: Valid if all facilities designated to provide cervical cancer services are assessed	YES
	DEN C	Total # of facilities assessed**	YES	NO
SQ1. % of facilities with provider compliance to clinical skill performance standards	NUM	# of facilities with provider compliance to clinical skill performance standards		
	DEN A	Total # of facilities in the country*	NO	NO
	DEN B	Total # of facilities designated to provide cervical cancer services	CONDITIONAL: Valid if all facilities designated to provide cervical cancer services are assessed	YES
	DEN C	Total # of facilities assessed**	YES	NO
TFR2. % of facilities with the infrastructure to provide basic health services	NUM	# of facilities with the infrastructure to provide basic health services		
	DEN A	Total # of facilities in the country*	NO	CONDITIONAL: Numerator and Denominator should be disaggregated by facilities providing cervical cancer services in order to measure service-specific readiness
	DEN B	Total # of facilities designated to provide cervical cancer services	CONDITIONAL: Valid if all facilities designated to provide cervical cancer services are assessed.	NO
	DEN C	Total # of facilities assessed**	YES	CONDITIONAL: Numerator and Denominator should be disaggregated by facilities providing cervical cancer services in order to measure service-specific readiness
NUM = Numerator; DEN = Denominator.				
**Country or defined subnational unit; Denominator is from the MFL, or other current comprehensive registry of public and private facilities*				
***DEN C is the same as DEN A in a census*				

[1] For SARA indicators, refer to: http://www.who.int/healthinfo/systems/sara_reference_manual/en/.

TOOL FOR DATA AGGREGATION AND ANALYSIS: SERVICE AVAILABILITY, FACILITY READINESS AND PERFORMANCE

This tool facilitates the calculation of service availability, facility readiness, and service quality indicators at the national or subnational level (e.g. province, district, county, etc.) through systematic aggregation of data. If information is being collected and analysed at the subnational level, indicate this in the table below and in subsequent tables as needed. Information from all subnational units in the country can be further aggregated in order to calculate indicators at the national level. Ensure that Data Review Questions and tools have been adapted to include all desired variables for indicator disaggregation (e.g. service type, full-time or part-time staff or services, facility level, public or private facility, etc.) prior to conducting data aggregation and review.

DATA REVIEW INFORMATION

Country Name: _____

Subnational Unit *(if applicable)*: _____ **Subnational Unit Name** *(if applicable)*: _____

Date of Data Review (DD/MM/YYYY): _____ **Date of Previous Data Review** (DD/MM/YYYY): _____

Data Reviewers (list names and roles): _____

DATA REVIEW QUESTIONS

1. How many health facilities are in the country (or subnational unit)?

   _____
   Data Source/s: _____

2. How many health facilities in the country (or subnational unit) are providing cervical cancer services?

   _____
   Data Source/s:_____

2.1. How many facilities in the country (or subnational unit) are providing each type of service?

Pap	_____
VIA	_____
VILI	_____
HPV Test (sample collection)	_____
HPV Test (processing)	_____
Cryotherapy	_____
Single Visit Approach	_____
LEEP	_____
Colposcopy	_____
Biopsy	_____
Endocervical Curettage	_____
Histology/pathology	_____
Other	_____

Data Source/s: _____

3. How many trained health-care providers in the country (or subnational unit) are providing cervical cancer services? _____
   Data Source/s: _____

3.1. How many trained health-care providers in the country (or subnational unit) are performing each type of service?

Pap	_____
VIA	_____
VILI	_____
HPV Test (sample collection)	_____
HPV Test (processing)	_____
Cryotherapy	_____
Single Visit Approach	_____
LEEP	_____
Colposcopy	_____
Biopsy	_____
Endocervical Curettage	_____
Histology/pathology	_____
Other	_____

Data Source/s: _____

4. What is the target population for cervical cancer screening services?

Target age range:
☐ 30–49 years
☐ Other (Specify)

Number of women in the target age range in the population (specify national or subnational area):
_____

Data Source/s: _____

5. What is the estimated number of women requiring treatment services for precancerous cervical lesions (i.e. target)?

   _____
   Data Source/s: _____

6. What is the estimated number of women requiring diagnostic services for invasive cervical cancer (i.e. target)?

   _____
   Data Source/s: _____

7. What is the estimated number of women requiring management and treatment services for invasive cervical cancer (i.e. target)?

   _____
   Data Source/s: _____

SERVICE AVAILABILITY AND FACILITY READINESS INDICATOR TABLES

CERVICAL CANCER SERVICE AVAILABILITY: BASIC INDICATOR

Service	Total Number of Public and Private Facilities Offering Each Service (A)	Total Number of Public and Private Facilities (B)	Service Availability (A/B x 100)
Screening			
Treatment of precancerous lesions			
Cervical precancer and invasive cancer diagnosis			
Single visit approach (screening and treatment offered during the same visit)			

CERVICAL CANCER SERVICE AVAILABILITY: BASIC INDICATOR DISAGGREGATED BY SERVICE TYPE

Service	Number of Public and Private Facilities Offering Each Service (A2)	Total Number of Public and Private Facilities (B)	Service Availability (A/B x 100)
SCREENING			
☐ Pap Smear ☐ VIA *(screening or triage)* ☐ VILI ☐ HPV Test *(sample collection)* ☐ HPV Test *(processing)* ☐ Colposcopy *(triage)* ☐ Other: _____	Pap Smear_____ VIA *(screening or triage)*__ VILI_____ HPV Test *(sample coll.)*___ HPV Test *(processing)*____ Colposcopy *(triage)*_____ Other:_____ TOTAL providing **ANY** screening service*_____		Pap Smear_____ VIA *(screening or triage)*__ VILI_____ HPV Test *(sample coll.)*___ HPV Test *(processing)*____ Colposcopy *(triage)*_____ Other:_____ % of facilities providing **ANY** screening service*____
PRECANCEROUS LESION TREATMENT			
☐ Cryotherapy ☐ LEEP ☐ Other: _____	Cryotherapy_____ LEEP_____ Other:_____ TOTAL providing **ANY** precancerous lesion treatment service*_____		Cryotherapy_____ LEEP_____ Other:_____ % of facilities providing **ANY** precancerous lesion treatment service**_____
CERVICAL PRECANCER AND INVASIVE CANCER DIAGNOSTICS			
☐ Colposcopy (diagnostics) ☐ Endocervical curettage ☐ Biopsy ☐ Histology/Pathology	Colposcopy *(diagnostics)*__ Endocervical curettage____ Biopsy_____ Histology/Pathology TOTAL providing **ANY** diagnostic service*_____		Colposcopy *(diagnostics)*__ Endocervical curettage____ Biopsy_____ Histology/Pathology % of facilities providing **ANY** diagnostic service**___

**Total may not be the straight sum of facilities counted for each service, as some facilities may provide more than one service*
***Numerator is the TOTAL number of facilities providing ANY precancerous lesion treatment service.*

CERVICAL CANCER SERVICE AVAILABILITY: OPTIONAL INDICATORS (FACILITY DENSITY, MOBILE UNIT DENSITY, HEALTH-CARE WORKER DENSITY)

Indicators may be adapted to include disaggregation by key elements (e.g. type of service, full-time or part-time staff or services, facility level, etc.)

Indicator	Numerator (A)	Denominator *(B)	Percentage (A/B X 100)
SA2. Facility Density: Number of facilities providing cervical cancer services or per 5,000 female population, if number in target population is unknown	*Number of facilities providing cervical cancer services:* _____	*Number in target population:* _____	
SA2.1. Mobile Unit Density: Number of facilities providing cervical cancer services per 5,000 female population, if number in target population is unknown	*Number of mobile units providing cervical cancer services (subset of SA2 Numerator):* _____	*Number in target population:* _____	
SA3. Health-care Worker Density: Number of trained health workers providing cervical cancer screening services per 5,000 female population/target population, and compared to a benchmark.	*Number of trained health workers providing cervical cancer services:* _____	*Number in target population:* _____	

CERVICAL CANCER FACILITY READINESS: BASIC INDICATORS

Indicators may be adapted to include disaggregation by key elements (e.g. type of service, full-time or part-time staff or services, facility level, etc.)

Indicator	Numerator (A)	Denominator *(B)	Percentage (A/B X 100)
FR1. % of facilities providing the services they are designated to provide	*Number of facilities providing the services they are designated to provide:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR2. % of facilities meeting screening and treatment service targets	*Number of facilities meeting screening and treatment service targets:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR3. % of facilities with sufficient number of trained staff providing services	*Number of facilities with sufficient number of trained staff providing services:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR4. % of facilities with sufficient number of staff who meet selection criteria to be trained in desired skill and are available to provide services once trained	*Number of facilities with sufficient number of staff who meet selection criteria to be trained in desired skill and are available to provide services once trained:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR5. % of facilities with the basic infrastructure to provide services	*Number of facilities with the basic infrastructure to provide services:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR6. % of facilities with a functional procurement and supply chain system	*Number of facilities with a functional procurement and supply chain system:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR7. % of facilities where the minimum equipment and supplies necessary to provide services are continuously available and functional	*Number of facilities where the minimum equipment and supplies necessary to provide services are continuously available and functional:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR8. % of facilities where the minimum equipment and supplies required for infection prevention are continuously available and functional	*Number of facilities where the minimum equipment and supplies required for infection prevention are continuously available and functional:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	

Table continued

FR9. % of facilities where basic medicines and test kits are continuously available	*Number of facilities where basic medicines and test kits are continuously available:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR10. % of facilities with basic data management materials and processes in place	*Number of facilities with basic data management materials and processes in place:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR11. % of facilities with clearly defined, functional referral mechanisms	*Number of facilities with clearly defined, functional referral mechanisms:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR12. % of facilities where relevant, current national policies and guidelines are readily available and widely understood	*Number of facilities where relevant, current national policies and guidelines are readily available and widely understood:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
FR13. % of facilities conducting awareness generation and education activities in the past 3 months, using a variety of up-to-date materials	*Number of facilities conducting awareness generation and education activities in the past 3 months, using a variety of up-to-date materials:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	

* *See Table 4.6 for additional detail*

SERVICE AVAILABILITY AND FACILITY READINESS: TRACER INDICATORS (STAFF AND TRAINING, EQUIPMENT, DIAGNOSTICS, AND MEDICINES)

Tracer Indicator TSA = Service Availability TFR = Facility Readiness	**Numerator (A)**	**Denominator *(B)**	**Percentage (A/B X 100)**
TSA1. % of facilities providing cervical cancer services	*See* **Cervical cancer service availability: basic indicator** *or* **basic indicator disaggregated by service type**		
TSA2. Health Infrastructure: Facility Density	*See* **Cervical cancer service availability: optional indicators**		
TSA3. Service Utilization: Number of outpatient visits (e.g. screening, cryotherapy, etc.) per capita per year	*Number of outpatient visits (e.g. screening, cryotherapy, LEEP) in a 12-month period:* _____	*Number of unique patients (in a 12-month period):* _____	
TSA4. Health Workforce: Health-care Worker Density	*See* **Cervical cancer service availability: optional indicators**		
TFR1. % of facilities with at least 1 trained staff member providing cervical cancer services	*Number of facilities with at least 1 trained staff member providing cervical cancer services:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
TFR2. % of facilities with the infrastructure to provide basic general health services	*Number of facilities with the infrastructure to provide basic general health services:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
TFR3. % of facilities with all minimum items (or tracer items) present on the day of the assessment	*Number of facilities with all minimum items (or tracer items) present on the day of the assessment:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
TFR4. % of facilities (providing cervical cancer services) with infection prevention and control mechanisms to provide basic general health services	*Number of facilities (providing cervical cancer services) with infection prevention and control mechanisms to provide basic general health services:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
TFR5. % of facilities (providing cervical cancer services) with all minimum items (or tracer items) present on the day of the assessment	*Number of facilities (providing cervical cancer services) with all minimum items (or tracer items) present on the day of the assessment:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
TFR6. % of facilities with relevant national guidelines readily available	*Number of facilities with relevant national guidelines readily available:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	

* *See Table 4.6 for additional detail*

PROVIDER AND FACILITY PERFORMANCE INDICATORS

SERVICE AND DATA QUALITY: PERFORMANCE INDICATORS

NOTE: SQ1 and SQ2.1 are tracer indicators for Service and Data Quality (see Table 4.6)

Indicator	Numerator (A)	Denominator (B)	Percentage (A/B X 100)
SQ1. % of facilities with provider compliance to clinical skill performance standards	*Number of facilities with provider compliance to clinical skill performance standards:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
SQ2.1. % of facilities complying with standards for the collection and management of quality data	*Number of facilities complying with standards for the collection and management of quality data:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
SQ2.2. % of facilities where key indicators and targets are understood, and benchmarks are met	*Number of facilities where key indicators and targets are understood, and benchmarks are met:* _____	*Number of facilities assessed or designated to provide cervical cancer services:* _____	
SQ3. % of facilities complying with the performance standard for client and community assessment of the quality of cervical cancer prevention services	*Number of facilities complying with the performance standard for client and community assessment of the quality of cervical cancer prevention services:* _____	*Number of facilities assessed or number of facilities designated to provide cervical cancer services:* _____	

** See Table 4.6 for additional detail*

MINIMUM REQUIREMENT LISTS FOR EQUIPMENT, SUPPLIES, AND COMMODITIES

The lists of basic items for each service provided below are in addition to the minimum requirements included in Readiness Category 5: Infrastructure, and Readiness Category 8: Infection Prevention (see Supportive Supervision tool). While availability and functionality of *all* basic items should be assessed in order to determine readiness of a specific facility to provide services, resources and capacity may limit the incorporation of all items into existing national or subnational surveys which aim to monitor general health service provision (such as SARA or SPA). In support of these instances, a limited set of *tracer items* may be considered for inclusion.

Considerations for Countries with High HIV Prevalence: Screening test positivity rate is typically higher among HIV-positive women than among HIV-negative women (often two times higher). Cryotherapy-eligible rate for HIV-positive women who are screen-positive may also be lower than for HIV-negative women. The estimated minimum quantities in the lists below may therefore require adaptation in areas of high-HIV prevalence, based on analysis of trends in service delivery and disease epidemiology.

Note on equipment wastage: The minimum quantities in the lists below do not account for wastage; therefore, final estimations should be adjusted based on context.

VIA AND CRYOTHERAPY EQUIPMENT AND SUPPLIES: NOTES ON ESTIMATION OF MINIMUM QUANTITY (LISTS 1–4)

Estimates of quantity are based on the following assumptions:

- VIA-positive rate of 5–10%, with estimate based on VIA-positive rate of 10%
- Eligible for cryotherapy rate of 85% and that all women eligible for cryotherapy receive the treatment

Based on these assumptions, estimate that 10 out of every 100 women will be VIA-positive, and approximately 9 of these women will receive cryotherapy. For ease of calculation, estimate 10 cryotherapy procedures per 100 women screened.

HPV TESTING AND CYTOLOGY: NOTE ON ASSESSING EQUIPMENT AND SUPPLIES (LISTS 5-6)

In the majority of situations, collection of specimens for HPV testing and cytology occurs at a health facility, while specimen processing occurs at a laboratory – both locations will need to be assessed for service availability and readiness. Some health facilities (such as regional hospitals) may have on-site laboratories; however, specimen processing likely still occurs in a physical space separate from the point of specimen collection. Availability of equipment and supplies and provider performance for HPV testing and cytology should be assessed at both the screening facility and the laboratory. Laboratory performance should be assessed through existing quality assurance measures. Further information regarding HPV testing laboratory processes can be found in *Integrating HPV testing in cervical cancer screening programs: a manual for program managers* [PAHO, 2016] and relevant test manufacturer's recommendations; further information on cytology can be found in *Comprehensive cervical cancer control: a guide to essential practice* [WHO, 2014].

Estimated minimum quantities in Lists 5 and 6 are based on the needs for HPV DNA testing, using the CareHPV test platform as an example, and are in addition to those required for general laboratory operation. Note that HPV test-specific manufacturer's manuals must be referenced and used when adapting these lists.

LIST 1: VIA NON-CONSUMABLE EQUIPMENT AND SUPPLIES

In addition to those listed for Infection Prevention, and Infrastructure.

In the list below, the quantity of supplies needed is based on seeing 10 clients per day or shift in one examination room. Amounts will need to be adjusted if a higher number of clients is seen per day, unless instruments can be properly processed during office hours without interrupting the client flow. Considerations for estimating the number of clients screened are based on expected client load, and are driven by a number of factors, including if the services are: 1) integrated with other reproductive health services, 2) provided on dedicated days, 3) provided via outreach or mobile services, or 4) part of a mass campaign.

VIA Equipment and Non-Consumables	Minimum Quantity	Comments
Specula – Graves, metal bivalve specula (medium and large)*	10 (8 medium, 2 large)	
Ring/sponge-holding forceps	10	If using wood kebab sticks (see consumable supplies below), the ring/sponge-holding forceps would not be necessary.
Kidney dishes	2	
Gynaecological examination table	1	
Macintosh or rubber sheet	2	Wipe down with 0.5% chlorine solution between clients.
Goose-neck lamp (or other good light source such as torchlight)	1	
Instrument trays or trolleys	1	
Specimen cups (vinegar)	1	
Movable and adjustable stool	1	
Timer, clock, or watch	1	
Privacy screens	1	Assessed under Category 5: Infrastructure.
Sheets and gowns	10	Alternatively, can inform the community that women coming in for screening should bring their sarong or similar dress to provide cover.

**Tracer item*

LIST 2: VIA CONSUMABLE SUPPLIES

In addition to those listed for Infection Prevention, and Infrastructure.

VIA Consumables	Quantity Per 100 Women Screened	Comments
Clean, non-sterile examination gloves – box of 100	4 boxes	Assume 4 gloves per client; glove size depends on providers
3–5% acetic acid (white vinegar) – 1 L bottle*	1.5 L	Assume 15 cc/client.
Roll of cotton wool to make cotton balls	< 1	Assume 3 cotton balls/client
Wooden kebab sticks	300	If using ring/sponge-holding forceps (see nonconsumables), kabob sticks would not be necessary
Small cotton swabs	100	
Non-sterile gauze roll	< 1	
Batteries (size AA)	2	Assumes using torchlights and certain size torchlight
Chlorine to make 0.5% solution	2 L	Quantity required is variable. *This item is assessed under Category 8: Infection Prevention*
Condoms to retract vaginal walls that are lax	10	
Tongue depressors to retract vaginal walls that are lax	10	

**Tracer item*

LIST 3: CRYOTHERAPY NON-CONSUMABLE EQUIPMENT AND SUPPLIES

In addition to those listed for VIA, Infection Prevention and Infrastructure

Cryotherapy Equipment and Non-Consumables	Minimum Quantity	Comments
Cryotherapy unit with three cryotips with non-extended nipples (19-mm X 2 and 25-mm X 1)*	2	
Gas cylinders (for nitrous oxide or carbon dioxide gas)	2	While 1 cylinder is the bare minimum, having 2 cylinders helps prevent interruptions in service delivery.
Additional specimen cup for alcohol with cotton balls (to wipe down/disinfect cryotherapy unit following use)	1	
High-level disinfected specimen cups (to store cryotips and for HLD of cryotips, if not autoclaving)	2	

**Tracer item*

LIST 4: CRYOTHERAPY CONSUMABLE SUPPLIES

In addition to those listed for Infection Prevention, and Infrastructure.

Estimates are based upon 10 out of the 100 women screened requiring cryotherapy treatment.

Cryotherapy Consumables	Quantity Per 100 Women Screened	Comments
Carbon dioxide or nitrous oxide gas*	20 lb cylinder per 8–12 treatments	One 20 lb cylinder will typically average 8–12 treatments; however, this is highly variable and influenced by local conditions; monitoring trends in service delivery will support estimation of women requiring cryotherapy and forecasting of supplies.
Small cotton swabs	100	
Wooden spatulas (tongue depressors): • For cryotherapy to retract lax vaginal walls, as needed	10	
Condoms: • For cryotherapy to retract lax vaginal walls, as needed • Lubricated for post-cryotherapy self-care, if women not abstaining from sexual intercourse for 6 weeks	 5 50	
Sanitary pads	10	
Batteries (size AA)	2	Assumes using torchlights and certain size torchlight
70–90% ethyl or isopropyl alcohol: • For disinfection of cryotherapy unit following use, and HLD of cryotips if not autoclaving • For HLD of cryotips, need to change solution weekly • Assume approximately 100 cc weekly	Variable	Estimated volume is dependent on if the alcohol is used for HLD and the volume of cryotherapy cases per week. *This item is assessed under Category 8: Infection Prevention.*

**Tracer item*

LIST 5: HPV TESTING NON-CONSUMABLE EQUIPMENT AND SUPPLIES

This list is an example based on needs for HPV DNA testing using the CareHPV testing platform (and general laboratory procedures) – test-specific manufacturer's manuals should be used to adapt this list. List below is in addition to requirements for VIA (except Acetic Acid), Infection Prevention, and Infrastructure.

SCREENING FACILITY EQUIPMENT AND NON-CONSUMABLES FOR HPV TESTING		
Item	**Minimum Quantity**	**Comment**
Tube rack or other mechanism for storing and transporting specimens in a vertical position	At least 1	Depends on number of samples generated at facility. *1 careHPV test kit runs with 90 test samples (+ 6 controls); therefore, a screening facility would require a tube rack or other mechanism for transporting 90 tubes per test batch.*
LABORATORY EQUIPMENT AND NON-CONSUMABLES FOR HPV TESTING		
Item	**Minimum Quantity**	**Comment**
Machinery for processing samples and power cables*	1	*For HPV testing on the careHPV platform: one machine encompassing a heater, shaker, and luminometer is required.*
Fixed volume pipette	1	The careHPV testing platform requires 50 QL fixed volume pipette
Variable volume repeater pipette	1	
4o C Refrigerator	1	*A refrigerator of the size: H 64" W 28" D 30" will store approximately 20 careHPV test kits*
Surge protector (Minimum 1500 VA)	1	
Temperature and humidity sensor	1	

**Tracer item*

LIST 6: HPV TESTING CONSUMABLE SUPPLIES

This list is an example based on needs for HPV DNA testing using the CareHPV test platform (and general laboratory procedures); test-specific manufacturer's manuals should be used to adapt it. List below is in addition to requirements for VIA (except acetic acid), Infection Prevention, and Infrastructure.

SCREENING FACILITY CONSUMABLES FOR HPV TESTING		
Item	**Quantity Per 100 Women Screened**	**Comment**
Sample collection brush or swab*	110	Includes additional 10% to cover potential need to re-take samples. *1 careHPV test kit runs with 90 test samples (+ 6 controls), therefore to complete 1 batch for careHPV testing, a screening facility would require 90 brushes and 90 sample tubes.*
Sample transport medium*	110	Includes additional 10% to cover potential need to retake samples. *1 careHPV test kit runs with 90 test samples (+ 6 controls), therefore to complete 1 batch for careHPV testing, a screening facility would require 90 brushes and 90 sample tubes.*

LABORATORY CONSUMABLES FOR HPV TESTING		
Item	**Quantity Per 100 Women Screened**	**Comment**
Assay microplate and reagents (HPV test kit)*	1 +	*1 careHPV microplate runs 90 samples + 6 controls*
Safety glasses	1	Per laboratory, or laboratory technician
Laboratory coat	1	Per laboratory, or laboratory technician
Non-powder gloves	4–6 per test batch	Assumes 1 laboratory technician, with glove changes between steps
Micropipette tips	Variable	Depends on test kit in use. *Running 1 careHPV test kit requires 96 x 200QL sterile tips with filter, 1 x 1.25QL tip and 4 x 1.0QL tips*
Tube racks	Variable	2–3 racks (holding 50 tubes) is typically sufficient at lower volume laboratories; Foam racks for 50–100 specimen can be reused
Paper towels	10–20	

**Tracer item*

LIST 7: NON-CONSUMABLE EQUIPMENT AND SUPPLIES – OTHER SERVICES

In addition to those for VIA, Infection Prevention, and Infrastructure.

CYTOLOGY	
Item	**Comment**
Light microscope*	For conventional Pap smear
COLPOSCOPY, BIOPSY, ENDOCERVICAL CURETTAGE	
Item	**Comment**
Colposcope*	Includes mobile colposcope, where applicable
Biopsy forceps	Only for colposcopy with biopsy
Ring forceps	Only for colposcopy with biopsy
Endocervical curette	
LEEP	
Item	**Comment**
LEEP electrosurgical generator (with smoke evacuator) and electrode handle*	
Return electrode	
Loop and ball electrodes*	
Dispersive plate/pad	
Electrosurgery pen	
Coated, non-conducting speculum, speculum tubing	
Ring/sponge-holding forceps	
Long tissue forceps	
Blood pressure machine/cuff	
Long needle holder	

**Tracer item*

LIST 8: CONSUMABLE SUPPLIES – OTHER SERVICES

In addition to those for VIA, Infection Prevention, and Infrastructure

CYTOLOGY	
Item	**Comment**
Glass slides and cover slips*	For conventional Pap smear
Spatula or brush	Wood or plastic; for sampling
Cytology fixative*	For conventional Pap smear
Liquid transport medium in individual specimen containers	For liquid based cytology
Specimen labels (and marker/pencil for labelling)	
VILI	
Item	**Comment**
Lugol's iodine*	
COLPOSCOPY, BIOPSY, ENDOCERVICAL CURETTAGE	
Item	**Comment**
Monsel's paste	For colposcopy with biopsy
Specimen bottles with 10% formalin*	For colposcopy with biopsy
LEEP	
Item	**Comment**
22-, 25-, or 27-gauge spinal needle, 3.5 inches long	
1–2% lignocaine with 1:200,000 epinephrine	Or ability to make, if not available
1–2% lignocaine plain*	
Monsel's paste	
Specimen bottles with 10% formalin	For LEEP with specimen collection (for histopathology)

**Tracer item*

SECTION 5

PREVENTION AND CONTROL COSTING – ANALYSIS AND PLANNING MODULE FOR SCREENING AND TREATMENT

INTRODUCTION

The goal of a comprehensive cervical cancer prevention and control programme is to reduce the burden of cervical cancer by (i) reducing human papillomavirus (HPV) infections, (ii) detecting and treating precancerous cervical lesions, and (iii) providing timely treatment and palliative care for invasive cancer [WHO, 2014]. WHO recommends two primary strategic interventions for achieving this goal: 1) introducing HPV vaccine to girls aged 9–13 years according to WHO guidelines; and 2) introducing cervical cancer screening and treatment. In order to plan, implement, and sustain effective cervical cancer prevention and control programmes capable of achieving the goal, it is critical to understand the financial investments required over time. Programme managers and policy-makers need information on the projected costs of cervical cancer interventions in order to make decisions on the "when", the "where" and the "what" of service introduction and scale-up. Key issues in determining sustainability and scalability include: estimation and analysis of service delivery costs, as well as costs associated with social mobilization; information, education, and communication (IEC); behaviour change communication (BCC); training; supervision; and monitoring and evaluation.

This section presents a facilitated costing analysis and planning process and tool which enable users to:

- Estimate service costs and coverage based on national and subnational data and needs;
- Estimate financial, economic, introductory and recurrent costs of cervical cancer programmes and interventions;
- Estimate service coverage rates based upon service cost, distribution, population need and predicted scale-up; and
- Explore cost versus service access trade-offs based on different models of public service delivery.

The screening and treatment module of the Cervical Cancer Prevention and Control Costing Tool (C4P-ST) presented in this section is an Excel-based data analysis tool, designed specifically to allow health programme managers and planners to estimate, analyse and synthesize costs for cervical cancer programmes and services. The C4P-ST tool was developed by WHO as a "screening and treatment" companion module to the C4P-HPV tool, which supports the costing of HPV vaccine programmes.

The robust analysis and planning process for which the C4P-ST tool was designed requires the engagement of a trained facilitator, as well as strong buy-in and commitment from the national government and partners in cancer control. Key roles in the process include a user or users (i.e. those who enter and analyse data using the Excel-based tool), and a multidisciplinary team of stakeholders who participate in the larger planning and costing process.

(To request the C4P-ST tool and the support of a trained facilitator, please contact: ncdsurveillance@who.int)

THE COSTING ANALYSIS AND PLANNING PROCESS

PURPOSE

In countries with an established cervical cancer prevention and control strategic programme or plan, and existing service provision, the process provides a structured way for stakeholders to collectively review, discuss, verify and update critical plan assumptions, which may impact programme costs. Cost trade-offs of various screening and treatment scenarios can be analysed to inform new plans for scale-up or modification of existing plans. Retrospective analyses can be used to validate prospective costs in current budget requests and to improve accuracy of costs and budgeting over time.

In countries without an established cervical cancer prevention and control strategic plan, programme or services, the process can help to operationally define the main programme components required to implement such a plan, to determine associated critical assumptions, and to estimate costs based on the assumptions and inputs. When costing initial strategic plans, the tool's embedded sample cost inputs may be used in the absence of country-specific cost data.

Many countries will have existing planning and costing processes for general health programmes, and some will have specific processes in place for cervical cancer screening and treatment programmes. Where functional, the existing processes and tools can be compared to the C4P-ST planning process, cost analysis tool, and inputs and critical assumptions (see Implementation Tools and Materials) to determine opportunities for strengthening. In addition to the information presented in this section, nascent programmes may find it useful to reference the comprehensive recommendations for national cervical cancer programme organization and development found in the WHO publication, *Comprehensive Cervical Cancer Control: A Guide to Essential Practice* [WHO, 2014].

ROLES AND RESPONSIBILITIES

Best practices for programme costing include robust planning processes with a team of multidisciplinary stakeholders.

Members to consider for participation in the in-country planning and costing team ideally include:

- An impartial facilitator trained in use of the C4P-ST tool;
- An in-country influential "champion" who can facilitate buy-in and engagement from country stakeholders;
- A technical lead ("user") who has access to the data required and is responsible for leading primary data collection;
- A health economist(s) or someone with quantitative skills and a background in economics or financing ("user"); and,
- Cervical cancer experts involved in the strategic planning and scale-up of cancer control programmes, and other stakeholders.

A strong skill-set in Excel and costing analyses is required for the team members identified as "users", i.e. those responsible for data entry and stewardship of the Excel-based tool.

The trained facilitator will provide further support and guidance for building the in-country team; however, the team composition should be based primarily on country preference.

Cervical cancer experts and stakeholders engaged in the process can include:

- Cervical cancer prevention and control programme managers;
- Financial planners and administrators;
- Health economists;
- Consultant economists;
- Health providers;
- Researchers; and
- Donors/external partners of cervical cancer programmes.

THE C4P-ST FACILITATOR

Facilitation is a requirement for the use of the C4P-ST tool. Because successful planning and costing requires the critical review of prevailing assumptions that contribute to costs and outcomes, facilitation by a skilled professional without ties to programme funding, implementation, services or outcomes helps ensure the objectivity of the process, and, by extension, the accuracy of the data collected, and the robustness of the results.

While gaining consensus on all key points used in planning and cost analysis can be tedious, a good facilitator can ensure engagement throughout the process so the resultant outcome is agreeable and of the best quality. It is the facilitator's role to enhance understanding and use of the tool; to work with tool users to ensure that key data needed to make objective decisions are available and collected; to gain the costing team's buy-in; and to ensure that all voices are heard. If some costing data are unavailable, the facilitator must ensure that stakeholders agree on the appropriate proxy data to use.

The recommended skills for a C4P-ST facilitator include:

- Impartiality – with no ties to cervical cancer programme funding, implementation, services, or outcomes;
- Working knowledge of health programme planning and costing;
- Group facilitation skills, including management of sensitive discussions and successful consensus building;
- A demonstrated ability to facilitate the use of costing tools is preferred; and,
- A strong skill-set in Excel and costing analyses is preferred.

Ownership of the planning and decision-making process of the national cervical cancer strategic plan lies with the national government, programme planners, policy-makers and other relevant stakeholders. While an external facilitator will guide the process to ensure that all activities are executed in an impartial and transparent manner, ultimately the process of using and implementing C4P-ST lies with the in-country stakeholders.

ACTIVITIES

There are five main activities in the C4P-ST planning and costing analysis process:

1. Preliminary data collection

2.Stakeholder agreement and buy-in

3.Data entry

4. Addressing data gaps

5.Analysis of outputs

PRELIMINARY DATA COLLECTION

The C4P-ST tool is a data analysis tool, not a data collection tool. In-country costing teams can develop data collection tools using the list of inputs and assumptions in the Implementation Tools and Materials at the end of this section. Data requirements include service costs and non-service costs that fit into several broad categories (see Table 5.2).

To reduce data collection burden, preliminary data collection, using country-developed data collection tools, can begin prior to the formal planning meetings conducted as part of stakeholder agreement and buy-in (outlined in the subsection "Acquiring Stakeholder Agreement and Buy-in" below).

DATA SOURCES

Some data can be gathered through publicly available data and/or by working collaboratively with partners in the country. Such data may include overall country population, size of the target population, health worker salaries, and number of facilities in the country, among others. Other data required for critical assumptions may be abstracted from existing routinely collected programme data or surveillance and survey data. To better facilitate cost data collection, a "Master Price List" has been included as a worksheet within the C4P-ST tool. This reference list includes equipment costs from Tanzania, Uganda, and Zambia, which can be used in countries with similar characteristics when costs are unknown or unavailable.

Users can also refer to the resources provided in other sections of this toolkit, such as the lists of minimum equipment and supplies in Section 4, Facility-based Surveys, and the requirements for monitoring outlined in Section 4, Patient and Programme Monitoring. Where an assessment of data and data systems was conducted using the tools presented in Section 1, Data Systems Assessment of this toolkit, the team can refer to the findings in the Financing, Budgeting and Costing domain to obtain foundational information.

NOTE ON ETHICS

Much of the costing data will come from interviews with country-level cervical cancer experts. Information gathered during interviews is not subject to standard research ethics, including confidentiality and protections of human subjects. Interviewees should be provided with information on the scope and purpose of the C4P-ST process, and on how the data they provide will be used and referenced.

ACQUIRING STAKEHOLDER AGREEMENT AND BUY-IN

The C4P-ST tool is a social tool which allows stakeholders to discuss programme goals and priorities, and agree upon assumptions and other inputs during facilitated planning and costing meetings. A critical step in the planning and costing process, is for key stakeholders to meet, review the preliminary data collected, identify gaps in data, resolve any discrepancies, and agree upon the best data to be used. Successful engagement in such meetings will result in consensus on sources of information and improve the integrity of the data collected.

The process of stakeholder discussion and consensus building optimizes the costing outcomes on service delivery options and related budgetary implications.

PURPOSE OF THE FACILITATED PLANNING AND COSTING MEETING

The Facilitated Planning and Costing Meeting provides a venue for a multidisciplinary, in-country costing team to interact and reach consensus on the data collected, and to ensure that the sources of data and cost analysis assumptions are acceptable to all team members.

The meeting allows team members to interact with several stakeholders responsible for policy-decision and service delivery in cervical cancer prevention and control, ranging from procurement specialists, to nurses that provide VIA, to oncologists conducting radiotherapy and chemotherapy.

CONDUCTING THE PLANNING AND COSTING MEETING

In countries with an existing, national cervical cancer strategy, the facilitator should use the strategy as the foundation for the Planning and Costing Meeting. The facilitator will need to familiarize him/herself with any existing strategic plans, initiatives, or campaigns ahead of time, and use these as the basis for discussion.

The facilitator should examine the worksheets under General Assumptions and Service Assumptions and gain consensus from the in-country costing team on the programme components and service delivery strategy to be used in the country. Planning meeting participants should identify the sites where services will be provided and the resources required for a five-year time period. Participants should also work to reach consensus on all data sources.

Key discussion questions include:

- Where will the cervical cancer screening take place (e.g. type and levels of health facilities, or other venues)?
- What is the target age group of the women to be screened?
- What is the plan for training health staff?
- Will the screening and treatment be phased-in or delivered nationwide simultaneously?
- What are the non-medical activities of the programme?
- What other assumptions are required for the cervical cancer screening and treatment in the country?

DATA ENTRY

As the in-country planning and costing team identifies the strategies to be costed, and data are collected, users can simultaneously enter data. This section includes a series of tables (Tables 5.6–5.13) that outline the worksheets included in the C4P-ST Tool, their purpose, and simple step-by-step instructions for entering data where applicable.

ADDRESSING DATA GAPS

As data are collected and transferred to the C4P-ST tool, it is important to assess and ensure that no critical data elements are missing. The in-country costing team should follow up with the most appropriate stakeholder to collect the missing data, or agree upon the use of proxy data.

ANALYSIS OF OUTPUTS

Stakeholders should use the collected data and tool analyses and outputs to guide their discussions on programme goals and priorities, and reach consensus on the overall cervical cancer prevention and control strategy. After the strategy has been defined and agreed upon, the tool can be used to estimate/project the costs of implementing one strategy or comparing the costs of implementing two or more strategies. For example, the government may want to compare the costs of introducing cervical cancer screening at all health facilities against introduction at a specific level (such as provincial hospitals). Users wishing to compare costs for different strategies should make a copy of the C4P-ST tool for each strategy, complete the strategy-specific costs, and make comparisons.

THE C4P-ST TOOL

STRUCTURE AND FUNCTIONALITY

SOFTWARE REQUIREMENTS

The tool is designed to be used with Microsoft Excel 2010 and subsequent versions.

CUSTOMIZATION

The tool aims to be transparent and logical by allowing users to see all input, calculations, and outputs. Estimates are based on the most current data available within the country at the time, and programme plans are customized to local needs.

The C4P-ST tool is easily customized to help countries discuss and determine:

- Target population(s);
- What community/social mobilization and sensitization activities will take place;
- What services will be provided (for guidelines on cervical cancer screening and treatment services, see *Comprehensive Cervical Cancer Control: A guide to essential practice* [WHO, 2014]);
- What types of providers will provide services;
- When and where services will be implemented and scaled; and
- Their monitoring, evaluation and supervision strategy.

The tool is sufficiently flexible to incorporate these different local assumptions; however, it is important to note that adding or deleting columns or rows will compromise the structure of the tool and render it unusable. If a row or cell is not applicable to the programme, the user must leave the field blank.

EFFICIENT NAVIGATION

The tool provides users with a hyperlink-based "Table of Contents" for efficient navigation throughout the different worksheets.

The Table of Contents also acts as a summary of the structure and content of the tool, outlining the various assumptions, outputs, presentation outputs, and appendices sections.

While the tool can be navigated by manually clicking worksheet tabs, the hyperlinks within the Table of Contents and embedded in each worksheet are more efficient, as users can navigate between any two worksheets using only two clicks.

EXPANDABLE AND COLLAPSIBLE CONTENT

The worksheets include the ability to expand and collapse headings, allowing users to focus their attention on specific content. Users can click on boxes containing plus or minus signs located to the left of the row numbers to expand (+) and collapse (-) the content and modify the amount of data being viewed at any given time.

STANDARDIZED SHEET CONSTRUCTION

PURPOSE AND CONTENT OF WORKSHEETS

Every worksheet is classified into one of five categories according to its purpose, with the core of the tool comprising "Assumption" sheets and "Output" sheets.

1. **Assumption** sheets are those with the suffix "BA" (Broad Assumption) or "TA" (Time-based Assumption) after the main title in the worksheet tab name. These sheets allow entry of user inputs, referred to as "Assumptions", via free text entry or selection from a list of options.

2. **Output** sheets are those with the suffix "BO" (Broad Output) or "TO" (Time-based Output) after the main title in the worksheet tab name. These sheets calculate and present results based on the assumptions provided by the user.

3. **Navigation** sheets facilitate tool navigation through the hyperlinked Table of Contents and Quick Find Index.

4. **Section and Subsection Cover** sheets are those with the suffix "SC" (Section Cover) or "SSC" (Subsection Cover) after the main title in the worksheet tab name. These cover sheets provide information about a specific section of the tool and the inputs required, and provide a hyperlinked Table of Contents for that section.

5. **Analysis and Presentation sheets** are those with the suffix "P" (Presentation) after the main title in the worksheet tab name. These sheets,

including the Dashboard-styled worksheet, present a summary of calculated outputs and other key information in table or graph form.

Every worksheet in the tool contains common content, such as a sheet title, a reference to the model name, hyperlinks to neighbouring sheets, error checks, and a hyperlink returning to the Table of Contents.

In addition to classification of worksheets by purpose, some sheets are further subcategorized based on content. Most non-cover sheets in the tool are categorized as either a BA or a TA sheet.

FORMAT, CONTENT AND PURPOSE OF CELLS

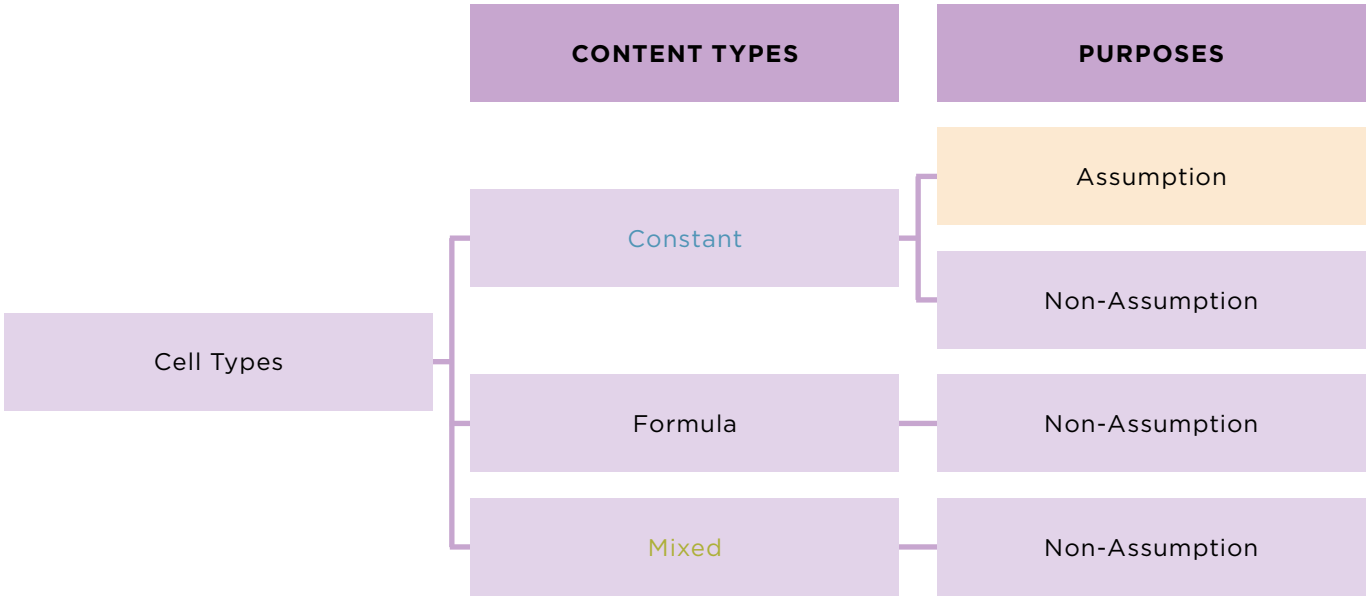
The C4P-ST tool employs the principle of purpose-based formatting, in which the content and purpose of each cell is communicated through consistent, standardized formatting. Each cell is classified as containing one of three types of content: Constant, Formula, and Mixed, with the additional feature of colour coding (Table 5.1).

TABLE 5.1
Cell content types

Content Type	Description	Example	Text Colour
Constant	Hard-coded, non-formula	100	Blue
Formula	Pure formula	=J20*J45	Black
Mixed	Formula containing constants	=J20+100	Green

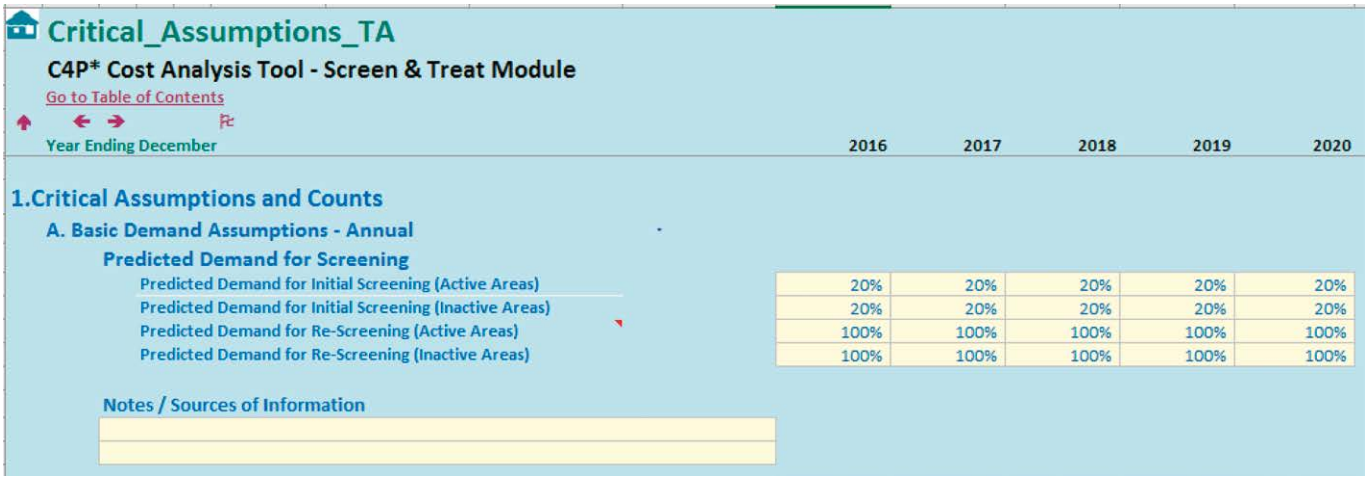
Many users will be familiar with distinguishing constants and formulas; however, this tool further distinguishes cells containing mixed content because of risks created by hard-coding data into formulas (e.g. hiding assumptions within formulas). Because font colouring is applied consistently, each worksheet becomes a visual dictionary of the content within each of its cells. Users can quickly and easily identify all the constants, formulas and mixed cells within each worksheet. A visual overview of cell types and their purpose are provided in Figure 5.1.

FIGURE 5.1
Cell content and purpose



While it is useful to be able to quickly and easily distinguish cell content based on font colour, model users will likely be more concerned with quickly and easily locating worksheets and cells containing assumptions. Assumptions sheets have a light blue overall background, making them visually distinguishable from other sheets, such as the output sheets with their white-background. Additionally, cells capturing the user inputs or assumptions can be clearly distinguished by their yellow fill, as shown in Figure 5.2.

FIGURE 5.2
Colour coding



CENTRALIZED CHECK SYSTEM

The tool contains a centralized check system to ensure that any data entry errors – such as invalid assumptions – are quickly and easily located and addressed. All checks within the tool are identified on the sheet in which they occur, and are summarized in a separate "Alert Check" summary worksheet. Any triggered alerts are communicated through the cell name on every worksheet, allowing users to quickly navigate to the source of the alert.

CALCULATED COSTS

The C4P-ST tool enables the user to estimate the additional resources required to add cervical cancer screening and treatment to existing health programmes at a regional or national level, and provides estimates of cost per screening or treatment service. Users can also calculate the percentage of shared costs for supplies, equipment and human resources that are shared between cervical cancer screening and treatment services and other health services. The tool is not, however, designed to calculate patient-borne costs, mobile-clinic costs, or to determine quality of services or number of lives saved due to services provided. The structure of the inputs allows both retrospective and prospective planning and costing.

With appropriate inputs, the tool generates basic programmatic cost data that can be supplemented by intervention effectiveness data to calculate the cost-effectiveness of allowing users to prioritize possible interventions. Outputs generated can also be used as the basis for budget impact analysis. The tool groups costs into several broad categories based on the activity to which they are related. These categories, as described in Table 5.2, are comprehensive and standardized yet flexible enough to apply to many country contexts.

TABLE 5.2
Description of cost categories of C4P-ST tool, by activity

Activity	Description
Screening Services	Services that consist of screening women for cervical cancer and precancerous lesions. The type of services offered can be defined by the user. Up to three methods can be included in the Screening Assumptions worksheet of Version 1.0 of the tool.
Diagnostic Service	Diagnostic service for women who have been screened and identified as having symptoms which might be caused by cancer. The type of services offered – biopsy, colposcopy, histopathology – can be defined by the user. This part of the tool is designed strictly for diagnostic services for cervical cancer. It should always include a diagnostic pathology. If diagnostic pathology is included as part of a treatment procedure, the costs for the diagnostic service and laboratory fees should be added to the treatment service provided.
Treatment Services	Service which consist of treating either precancerous lesions or invasive cancer in women. Space for seven treatment services are included in Version 1.0 of the tool.
Microplanning	Operational planning meetings at the national and subnational levels which are designed to facilitate the introduction or scale up of a cervical cancer screening and treatment programme by the government.
Training	Initial competency-based training of service providers, trainers, and supervisors designed to facilitate the initiation of cervical cancer screening and treatment services and programmatic support. It is assumed that after initial trainings, additional education will be incorporated into the government's routine training programme.
Social Mobilization and Communication	Initial and continuing social mobilization, behaviour change communication, and information and educational communication support activities.
Supervision, Monitoring, and Evaluation	Initial and continuing supervision, monitoring, and periodic evaluation activities specifically related to cervical cancer screening and treatment.
Other Activities	Reserved for Other Direct Costs not previously added in any of the above. Both recurring and capital costs may be entered here.

The costs within the broad activity categories are operationally differentiated into the standard financial and economic costs, and recurrent and capital costs.

FINANCIAL AND ECONOMIC COSTS

Both financial and economic costs are calculated (Table 5.3). The user can choose which is most appropriate depending on the objective of the analysis.

Financial costs (also referred to as "bookkeeping costs") are the value of resources to the MoH or other implementing agencies and involve actual monetary payments and expenditures for introducing programmes such as supplies, equipment, training resources, and developing new communication materials. If the user wants to know the additional costs incurred by the MoH, for example, they should focus on the financial cost calculation.

Economic costs comprise the value of expenditures directly incurred when introducing a programme and those previously paid for or owned by the MoH or implementing agency, such as the salaries of health personnel, donated equipment, and time of volunteers. This analysis gives a more complete and true picture of resources that are tied up in the provision of cervical cancer screening and treatment and their opportunity costs, and could be used in cost-effectiveness or cost-benefit analyses.

Table 5.3 presents a comparison of resources included in cost estimation based on whether financial or economic costs are being calculated. For microplanning, for example, the value of time spent in meetings of salaried personnel is included in economic costs but not in financial costs.

The main difference between financial and economic costing relates to whether "opportunity cost" is considered:

1. The time spent by salaried health personnel, and volunteers, is valued in economic costing because there is an opportunity cost to this time (i.e. the workers are unable to spend time on other activities when they are occupied with cervical cancer screening and treatment), but are not included in financial costs because these are already paid for with implementing agency salaries;

2. The value of donated goods and services is included in economic costs but not in financial costs because there is an opportunity cost to their use.

In other words, financial costs include only costs that have been explicitly incurred, whereas, economic cost includes opportunity costs. In cases where the financial cost is low, ignoring economic costs may produce the illusion that the programme would cost little to introduce. The opportunity costs then become "hidden" costs. Financial costs can be equal or less (but never higher) than the economic costs.

TABLE 5.3
Examples of financial and economic costs by screening and treatment activity

Activity	Financial Costs	Economic Costs
Microplanning	Per diems and travel allowances Venue rental Transport	Personnel time spent in meetings Per diems and travel allowances Venue rental Transport
Training	Development of training materials Per diems and travel allowances Venue rental Transport Training materials Stationery	Value of personnel time spent on training Development of training materials Per diems and travel allowances Venue rental Transport Training materials Stationery
Social Mobilization/ Information, Education and Communication	Facilitator time in meetings Per diems and travel allowances Stationery Printing of materials Production of TV and/or radio spots	Value of personnel, and volunteer, time spent on material development and other activities Facilitator time in meetings Per diems and travel allowances Stationery Printing of posters and leaflets Production of TV and/or radio spots
Service Delivery	Transport fuel Personnel per diems to travel to outreach sites Supplies – e.g. cotton Screening, diagnostic and treatment equipment	Value of personnel time spent on vaccination Transport fuel Personnel per diems to travel to outreach sites Supplies – e.g. cotton Screening, diagnostic and treatment equipment
Monitoring and Evaluation	Tally sheets or registers Pens and pencils Materials for surveillance	Tally sheets or registers Pens and pencils Materials for surveillance
Supervision	Travel allowances Transport fuel and maintenance Stationery	Value of personnel time spent on supervision Travel allowances Transport fuel and maintenance Stationery
Waste Management	Purchase of incinerators (annualized) Fuel Transport	Purchase of incinerators (annualized/ discounted) Fuel Transport

RECURRENT AND CAPITAL COSTS

The costs of the resources listed in Table 5.3 can be categorized by whether they must – in the simplest of terms – be effectively paid for once (capital costs) or on a regular basis (recurrent costs).

Recurrent costs (Table 5.4): the value of resources that last less than one year:

- Personnel costs – using cost per personnel engaged in a single procedure per minute.
- Transport
- Maintenance
- Monitoring, evaluation and supervision
- Short term training activities that last less than one year (does not include initial training activities or material development)
- Supply costs – using cost per units of supply required per procedure
- Other direct costs – using unit costs multiplied by the number of units required to complete one procedure (laboratory tests, bed days, and other direct costs are included).

TABLE 5.4
Associated recurrent costs of screening and treatment activities

Activity	Recurrent Costs
Information, Education and Communication	Personnel Time, Printing, Production of Leaflets, Posters, Radio and Television Spots
Service Delivery	Personnel Time, Supplies, Drugs, Per Diems, Transport
Supervision	Supervisor Time, Driver Time, Per Diem, Transport
Monitoring and Evaluation	Tally Sheets, Data Entry Time
Waste Management	Fuel for Incinerators

Capital costs (Table 5.5): the value of initial investments and resources that last longer than one year:

- Microplanning
- Initial training
- Communication material development
- Equipment costs – using cost per site (user-designated collection of equipment required to conduct one or more procedures). When estimating equipment costs, equipment-useful-life years should be considered, and a user-defined, maintenance cost percentage can be added. For example:
  - laboratory equipment
  - vehicle requirements
  - incinerators

TABLE 5.5
Associated capital costs of screening and treatment activities

Activity	Recurrent Costs
Service Delivery	Equipment – e.g. cryotherapy machines, LEEP, radiotherapy machines
Introduction	Microplanning, initial training, curriculum development, communication material development
Waste Management	Additional incinerators
Other Transport	Additional vehicles, motorcycles, boats, bicycles, etc.

Calculation of capital costs are annualized and/or discounted, differing from recurrent costs. The specific type of depreciation will depend on the purpose of the analysis and whether financial or economic costs are preferred. When calculating financial costs, straight-line depreciation is used in the calculation of capital costs – that is, the cost of the item is annualized through dividing it by the useful life years of that item. For example, a cryotherapy machine could be expected to last for ten years and the total cost would be divided by ten. Straight-line depreciation assumes that capital goods are used up equally over the useful time period of the item. For economic costs, capital goods are discounted as well as annualized. This type of depreciation assumes that people have time preference and prefer to use goods and services now rather than in the future.

INSTRUCTIONS FOR USE

The following tables provide detailed instructions for data entry into the C4P-ST tool and are organized by sections that correspond with those listed in the Contents tab of the tool:

1. Country Setup (Table 5.6)

2. Assumptions (Tables 5.7–5.9)

3. Outputs (Table 5.10)

4. Analysis (Table 5.11)

5. Helper-Plug-ins (Table 5.12)

6. Appendices (Table 5.13)

Similar instructions for some worksheets are included directly in the tool, and the trained facilitator will provide guidance throughout the process as needed. Please see the Implementation Tools and Resources at the end of this section for complementary resources that support the creation of data collection tools.

REMINDER: Adding or deleting columns or rows will compromise the structure of the tool and render it unusable. If a row or cell is not applicable to the programme, the user must leave the field blank. In order to enter data, the user must turn off worksheet protection: Go to FILE, select INFO, and then select UNPROTECT.

TABLE 5.6
Country set-up

COUNTRY SET-UP REMINDER: Click on the boxes containing plus/minus signs located to the left of the row numbers to expand (+) and collapse (-) the content.		
Worksheet Name	**Purpose**	**Instructions** *(Comments)*
Team Information	To record information on the user and the planning and costing team members.	1. Enter the user's name, organization, address and email address. 2. Enter the costing team's names, email addresses, and organization.
Custom Labels	To record information on target population characteristics, subnational level types, facility types, and population segment and category.	1. Enter the country name and subnational level name labels 2. Enter up to ten types of health facilities (for example: community clinic, provincial/ regional hospital, national hospital, etc.). (Once this information is entered, the names are automatically entered into other worksheets in the tool.) 3. Define and fill in subsegments within the target population. (Subsegments could include HIV status, age group, etc.)
Time Period	To list the financial year end month, programme start year, programme term, and local currency denomination.	1. Enter the Financial Year End 2. Enter the Programme Start Year (the first year of programme planning and costing). If your programme is ongoing, simply enter the year in which you want to start planning and costing. (The tool is designed to have a baseline "existing" year and up to five years of projection. If the country is already providing some screening and treatment methods and is considering scaling up or introducing other methods, the start year should be the baseline existing year.) 3. Enter the Programme Term (Years): the number of years you want to plan and cost. 4. Enter the local Currency Denomination: the three-letter code for your local currency.

The Assumptions sections (see Tables 5.7–5.9) allow the user to enter the data from which the tool will calculate the projected outputs and associated costs. "Assumptions" are defined as inputs to the calculations that are accepted as true. Assumptions should be as accurate as possible, based on the most reliable information available. Sources should be documented in the notes/source of information cells.

1. The General Assumptions SSC subsection (Table 5.7) includes:

   a. Subnational names and programme timing.

   b. Critical assumptions related to population, epidemiology, and services.

   c. Economic assumptions.

   d. Pricing assumptions.

2. The Service Assumptions SSC subsection (Table 5.8) includes:

   a. The names of each service to be provided.

   b. The capacity of each type of facility to provide each service.

c. The types and quantities of personnel, supplies, equipment, and other direct costs required to provide each service.

d. The types and numbers of service sites to be open in each type of facility in each service area, by year.

TABLE 5.7
General assumptions

GENERAL ASSUMPTIONS REMINDER: Click on the boxes containing plus/minus signs located to the left of the row numbers to expand (+) and collapse (-) the content.		
Worksheet Name	**Purpose**	**Instructions** *(Comments)*
Subnational Names and Timing	To enter information on subnational levels in which the programme will be active. Data elements include the regions, number of districts, and programme start year by second level area.	1. Province names: a. In the first column, enter the names of the second level areas (e.g. regions or provinces). b. In the second column, enter the number of third level areas (e.g. districts). For example, if there are three districts in a province, the user would enter "3" in this cell. 2. Programme start year: a. Enter the year that the cervical cancer screening and treatment programme will begin in each second level area.
Critical Assumptions	To specify basic assumptions and counts required to estimate costs of screening and treatment, specifically: 1. Predicted demand for screening, 2. Basic screening method distributions, 3. Epidemiological assumptions, 4. Basic referral assumptions, 5. Basic re-screening timing assumptions, and 6. Annual population counts by province.	1. Critical Assumptions and Counts a. Basic Demand Assumptions-Annual: i. Enter the percentage of women eligible for screening that will seek services in "active areas" (where facilities are providing screening services): ii. Enter the percentage of women eligible for screening living in "inactive areas" (areas without screening services) that will seek services in active areas: b. Basic Initial Screening Method Distribution i. Enter the percentage of screenings conducted with each screening method over the project period (up to 5 years) c. **Epidemiological assumptions**: Enter the percentage of women that will have small precancerous lesions, large precancerous lesions, suspect cancer, and the percentage that will have different stages of invasive cancer) (If this information is not available at the country level, the user can use data from neighbouring countries, or the *WHO Six-Country Study* [WHO, 2012]. The user should look for appropriate comparability across HIV positivity; population size, density, and demographics; density of services within health system; etc.) d. **Basic referral assumptions**: Enter the assumptions for treatment referral proportions and diagnostic pathology referrals e. **Basic re-screening time assumptions**: Enter the re-screening interval for both women receiving a normal test result and women who were referred. 2. **Annual population counts**: Enter the population counts for each target population subsegment by second level area. (Target population subsegments are autopopulated as sub-bullets under the Annual Population Counts.)
Economic Assumptions	To specify exchange rates for local and foreign currencies as well as annual inflation and discount rates.	1. Enter currency codes and exchange rates. 2. Enter economic rates
Master Price List	To specify prices of resources used in the cervical cancer programme.	1. Select the currency from the dropdown menu (The worksheet is prefilled with currency abbreviations. When a currency is selected, the equipment tables will prepopulate with default data from the country. The user can write over these data with actual data from the country.) 2. Enter information on health personnel salaries, and prices for equipment and supplies. (**NOTE ON SHARED EQUIPMENT**: Equipment costs should be costed for the proportion of use for cervical cancer. For example, if a radiotherapy machine is used 1/3 of the time for cervical cancer therapy, then the user should designate the number of equipment units as 0.33 rather than 1.) The Master Price List can be cross-referenced with the Equipment Lists included in Section 4 of this toolkit, Facility Based Surveys.

TABLE 5.8
Service assumptions

SERVICE ASSUMPTIONS REMINDER: Click on the boxes containing plus/minus signs located to the left of the row numbers to expand (+) and collapse (-) the content.		
Worksheet Name	**Purpose**	**Instructions** *(Comments)*
Screening Assumptions	To record assumptions for up to three screening methods.	1. **Name of Service and Service Short Code**: Enter the name of the service (Visual Inspection with Acetic Acid, Pap Smear, etc.) and a short code (SCREEN_VIA for example). 2. **Annual Capacity per Individual Facility Type**: Enter the estimated annual capacity for each facility type. 3. Service Requirements and Costs a. Enter the **prerequisite infrastructure requirements** and sources of information. These are equipment that were already at the facilities and don't need to be costed in an incremental analysis (for example, gynaecological couches). b. Enter the average number of service days, service hours per days, and average minutes per type of service by name of health facility offering each type of screening. Specify the **personnel required** for screening by facility level. Also, indicate the number of minutes spent by each type of personnel on pre-procedure activities, procedure, and post-procedure care. c. List the **supplies required** for each diagnostics method and the units needed per procedure. d. List the **equipment required** for each diagnostics method and the units needed per site. e. Enter all **Other Direct Costs**. An illustrative list of other direct costs is included below the data entry tables. (**Note on Customization**: The Screening Assumptions worksheet includes space for up to 3 screening methods. Screening methods – including VIA, VILI, cytology, HPV/DNA testing – can be added by the user to the Screening Assumptions worksheet. Equipment lists for these procedures are included in the tool's Appendices under Supplies_and_equipment_P_MS.)
Screening Assumptions_ ANNUAL	To designate the number of facilities offering screening services.	Enter the number of eligible facilities that offer each type of screening service by region and year.
Diagnostic Assumptions	To record assumptions for diagnostic services provided in the country, specifically cervical biopsy/ histopathology services.	1. **Name of Service and Service Short Code**: Enter the name of the service (colposcopic biopsy, endocervical curettage, etc.) and a short code. 2. **Annual Capacity per Individual Facility Type**: Enter the estimated annual capacity for each facility type. 3. Service Requirements and Costs a. Enter the prerequisite infrastructure requirements and sources of information. These are equipment that were already at the facilities and don't need to be costed in an incremental analysis (for example, gynaecological couches). b. Enter the average number of service days, service hours per days, and average minutes per type of service by name of health facility offering each type of diagnostics. Specify the personnel required for diagnostics by facility level and indicate the number of minutes spent by each type of personnel on pre-procedure activities, procedure, and post-procedure care. c. List the supplies required for each diagnostic method and the units needed per procedure. d. List the equipment required for each diagnostic method and the units needed per site. e. Enter all **Other Direct Costs**. An illustrative list of other direct costs is included below the data entry tables.
Diagnostic Assumptions_ ANNUAL	To designate the number of facilities that will provide diagnostic services by facility level.	Enter the number of eligible facilities that offer diagnostic services by region and year.

Table 5.8 continued

Intervention Assumptions	To record assumptions on treatment services for precancerous lesions and invasive cancer.	1. **Name of Treatment Method and Short Code**: Enter the name of treatment (LEEP, cryotherapy, chemotherapy, radiology, etc.) and a short code. 2. Enter the proportion of women that are referred that seek services for each service and the source of information for that assumption. 3. **Annual Capacity per Individual Facility Type**: Enter the estimated annual capacity for each facility type. 4. Service Requirements and Costs a. Enter the **prerequisite infrastructure requirements** and sources of information. These are equipment that were already at the facilities and don't need to be costed in an incremental analysis (for example, gynaecological couches). b. Enter the average number of cervical cancer service days per year, average number of service hours per day, and average number of minutes per service by type of facility. Specify the **personnel required** for treatment by facility level. Also, indicate the number of minutes spent by each type of personnel on pre-procedure activities, procedure, and post-procedure care. c. List the **supplies required** for each cervical cancer and pre-cancer treatment method and the units needed per procedure. d. List the **equipment required** for each cervical cancer and pre-cancer treatment method and the units needed per site. e. Enter all **Other Direct Costs**. An illustrative list of other direct costs is included below the data entry tables.
Intervention Assumptions_ ANNUAL	To designate the number facilities that will offer each type of cervical cancer service.	1. Fill in the number of facilities with the capacity to provide treatment services by region and year for each treatment method. (These facilities should be limited to those outlined in the Intervention Assumption sheet.)

TABLE 5.9
Other cost assumptions

OTHER COST ASSUMPTIONS The "Other Cost Assumptions" section includes only 1 worksheet ("Non-Service Assumptions") with multiple sections. Purpose: To record the assumptions related to non-clinical activities. REMINDER: Click on the boxes containing plus/minus signs located to the left of the row numbers to expand (+) and collapse (-) the content.	
Section Name	**Instructions** *(Comments)*
Microplanning	1. Choose the applicable currency from the dropdown menu. 2. Enter the financial and economic costs of conducting micro-planning activities by level (national, subnational, etc.). 3. Enter the estimated number of microplanning activities per year. (**The financial cost** is the outlay or direct expenditures invested in the service [e.g. facilitators' fees, travel allowance, venue rental, etc.], but does not include donated goods or salaried personnel costs. The **economic cost** includes the outlay plus the value of donated goods, salaried personnel costs and other "hidden" costs.)
Training	1. Choose the applicable currency from the dropdown menu. 2. Enter the financial and economic costs for each training activity based on the max number of participants trained. 3. Enter the estimated number of training activities per year.
Social Mobilization and Communication	1. Choose the applicable currency from the dropdown menu. 2. Enter in the **financial and economic cost** per activity to increase the number of women availing of screening and treatment services. 3. Enter the estimated number of social mobilization and communication activities per year. 4. Enter the financial and economic costs per **initial** IEC and BCC support activities (for example, production of brochures). 5. Enter in the cost of **continuing** support such as re printing of flyers or brochures over the period of the cost projection. 6. Enter the estimated number of initial support packages per year. 7. Enter the estimated number of continuing support packages per year.
Supervision	1. Choose the currency from the dropdown menu that will be used for supervision costs. 2. **Supervision**: Enter the financial and economic cost of supervision visits, and the number of expected supervisory visits by level. 3. **Monitoring**: Enter the financial and economic costs for monitoring activities. 4. **Evaluation**: Enter the financial and economic costs for evaluation activities.
Other Recurrent and Capital Costs	1. Choose the applicable currency from the dropdown menu. 2. Enter in the **financial and economic cost** per additional recurrent cost item. 3. Enter the **estimated volume** of each recurrent item. 4. Enter in the financial and economic cost per additional capital good. 5. Enter the **estimated volume** of each additional capital good.

TABLE 5.10
Other cost assumptions

OUTPUT AND COST SUMMARIES The C4P-ST tool is an algorithm that produces outputs and summary information for programme planning based on the complete data set. Outputs are automatically generated based on the data entered into the Assumptions worksheets. Outputs are generated based on the most current data available within the country at the time of estimation and programme plans can be customized to fit country needs. Results of the cost estimation are found in the **Outputs and Cost Summaries** sections. Results are provided for population counts, annual screenings, annual diagnostics provided, annual interventions provided, and other costs. REMINDER: Click on the boxes containing plus/minus signs located to the left of the row numbers to expand (+) and collapse (-) the content.	
Worksheet Name	**Purpose**
Outputs	The **Outputs** sheets show the capacity, need, demand (total eligible population seeking the procedure), total procedures provided and outcomes (i.e. number of women with VIA-negative results, and number of women referred for treatment by type of services).
Cost Summaries	The **Cost Summary** sheets show cost per service by subnational region over a five-year period. The **Programme Cost Summaries** sheet shows the financial and economic costs of the planned cervical cancer screening and treatment activities by year and cost component, as well as the financial and economic costs of initial investment (initial upfront resource requirements for starting the cervical cancer programme). It also has tables on the introduction costs (i.e. microplanning, training, and social mobilization, recurrent costs, and service delivery outputs). Other Outputs and Cost Summary sheets are organized by type of service (e.g. **VIA Cost Summary**).

TABLE 5.11
Analysis

ANALYSIS The four sheets included in the Analysis section provide the in-country costing team with the ability to visualize the costing data, and identify gaps and issues at a glance. **All analysis sheets are autopopulated as data are entered into the Assumptions sheets.**	
Worksheet Name	**Purpose**
Model logic	Allows the user to follow patients through the continuum of care, and identify the number of women availing of services and those who are lost to follow up.
Cost per service	Includes the financial and economic costs by service.
Proportional costs	Includes a series of pie charts that allow users to see the proportion of financial and economic costs by type of service and activity.
Service by year and area	Includes financial and economic costs for each service by year; as well as the number of women eligible for the service, the number of women seeking the service, and the available capacity to provide each service.

TABLE 5.12
Helper plug-ins

HELPER PLUG-INS The C4P-ST tool has five plug-ins to help the in-country costing team make decisions on programme capacity, demand, training and meeting costs. REMINDER: Click on the boxes containing plus/minus signs located to the left of the row numbers to expand (+) and collapse (-) the content.		
Worksheet Name	**Purpose**	**Instructions** *(Comments)*
Service unit capacity and staffing requirements estimator	Helps users estimate the number of services that can be provided by each health staff person and the number of staff that should be available to provide services.	Enter the following information to estimate the number of services that can be provided per health worker: 1. Minutes required to provide each service, 2. Number hours per service day; and 3. Service days per month. (This plug-in includes sliders that allow users to easily adjust the number of minutes, hours and days in order to observe the effect on service capacity.)
Effect of demand on current assumed capacity	To compare the estimated number of women seeking cervical cancer services with the screening capacity to provide services by year and area.	(The slider on this page allows users to adjust the percentage of women seeking screening (demand) in order to observe the effect on capacity.)
Training programme cost estimator	To estimate training costs.	Enter the information on the travel and allowances for facilitators, support personnel and participants, as well as lodging and room costs, meals and refreshments, material and supplies, equipment, and other direct cost.
Meeting cost estimator - assumptions	To estimate meeting costs.	Enter the assumptions needed for sensitization, microplanning, and community mobilization meeting. (Sensitization meetings include meetings with community leaders; microplanning meetings include operational meetings at the national and subnational levels, and community meetings include community members)
Meeting cost estimator - outputs	Shows the financial and economic cost outputs by type of meeting.	(The outputs are auto-populated as data are entered into **Plug-in #4.**)

TABLE 5.13
Appendices

APPENDICES The C4P-ST tool has seven in-built Appendices.	
Appendix	**Purpose**
Revisions Log	Helps users detail and track revisions made.
Checks and Alerts	To detect and isolate issues—such as invalid assumptions. Helps ensure users can quickly and easily locate and address any data entry errors.
Notes	Provides users with minimal notes on the structure of the tool as well as contact information for the developers of the tool.
Supplies and Equipment	Provides lists of equipment needed to perform **pelvic examinations**, as well as: • Screening methods including: - Pelvic examination - VIA - HPV DNA testing • Biopsy • Treatment of precancerous lesions including: - LEEP - Cryotherapy The Equipment Lists can be cross referenced with the Equipment Lists included in the Facility Based Surveys section of this toolkit.
Glossary	To provide definitions of terms used throughout the tool.
Style Sheet	Contains formats and styles, sheet naming conventions, and range naming keys to improve usability.
Quick Find Index	Includes hyperlinks to each worksheet for easy navigation.

IMPLEMENTATION TOOLS AND MATERIALS

ASSUMPTION INPUTS REFERENCE SHEET

This references sheet defines each of the inputs, or assumptions, that will be entered into the C4P-ST Excel-based tool. This list can be used by the multidisciplinary costing team in conjunction with the tool itself, to develop data collection or aggregation tools and to determine data sources. Where a process for costing analysis and planning is being used outside of the C4P-ST process, this list of assumptions can be referenced to identify any gaps in the existing process.

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
GENERAL ASSUMPTIONS			
NAMES, LABELS AND TIMING			
Country name label	The full name of the country		Custom_Labels_BA
Subnational level name labels	Labels for each type of subnational administrative level present in the country which will be used to autopopulate other assumptions, outputs, and presentation worksheets	Example: region, state or province; county or district; etc.	Custom_Labels_BA
Facility type name labels	Labels for each type of facility present in the country health-care system which will be used to autopopulate other assumptions, outputs, and presentations worksheets	Example: central referral hospital, district hospital, health centre, health post, etc.	Custom_Labels_BA
Population segment and category name labels	Labels for the different segments and categories of the programme's target population which will be used to autopopulate other assumptions, outputs, and presentations worksheets	Example: the target population broken down into HIV+ status and HIV- status segments, with those segments further broken down into target age group categories	Custom_Labels_BA
Financial year end	The month in which the country's financial year ends		Time_Period_BA
Programme start year	The year when this costing and planning process was begun		Time_Period_BA
Programme term	The number of years (up to 5) which will be costed		Time_Period_BA
Local currency denomination	The 3-letter code for the local currency		Time_Period_BA
Names of second administrative level units	The actual names of the individual units in the second administrative level.	Example: Western Region, Mountain Region, etc.; Sunrise State, Eastern State, etc.; Northern Province, Capital Province, etc.	SubNational_Names_and_Timing_BA
Number of subdivisions in each second administrative level	Clarifies how subnational units are further broken down.	Example: where provinces are the second administrative level, and districts are the third administrative level, the input would be the number of districts in a specific province.	SubNational_Names_and_Timing_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
BASIC DEMAND ASSUMPTIONS – ANNUAL			
Predicted annual demand for first-time screening and routine re-screening in active and inactive programme areas	*Predicted demand* is the estimated number of women who will seek services out of the target population in a given year. *Active programme* areas are the subnational levels in which cervical cancer services are being (or will be) provided.	**Numerator**: [Estimated] number of women in [active or inactive] areas who will seek services **Denominator**: Total [expected] number of women eligible for screening in all [active or inactive] areas	Critical_Assumptions_TA
BASIC SCREENING METHOD DISTRIBUTION ASSUMPTIONS			
Initial screening method distribution	The percentage of screenings conducted with each screening method over the project period	**Numerator**: [Estimated] number of screenings conducted using a specific methodology **Denominator**: Total number of [expected] screenings	Critical_Assumptions_TA
EPIDEMIOLOGY ASSUMPTIONS			
Cervical cancer screening and precancerous lesions	Percentage of women with a normal screening result, with small precancerous lesions (e.g. cryotherapy eligible), and with large precancerous lesions.	**Numerator**: [Estimated] number of women receiving a specific result [normal result, small precancerous lesions, large precancerous lesions] **Denominator**: Total [expected] number of women screened	Critical_Assumptions_TA
Invasive cervical cancer	Percentage of women identified with early stage invasive cervical cancer, mid stage invasive cancer, and late stage invasive cancer.	**Numerator**: [Estimated] number of women receiving a specific diagnosis [early stage, mid stage or late stage invasive cervical cancer] **Denominator**: Total [expected] number of of women screened	Critical_Assumptions_TA
BASIC REFERRAL ASSUMPTIONS			
Screening referral proportions	Proportion of screened women who were referred for treatment of precancerous lesions or further evaluation or diagnostics	**Numerator**: [Estimated] number of screened women referred for each treatment intervention or diagnostic service **Denominator**: Total [expected] number of women screened	Critical_Assumptions_TA
Diagnostic pathology referral proportions	Proportion of women receiving diagnostics for invasive cervical cancer who were referred for invasive cervical cancer treatment and management services	**Numerator**: [Estimated] number of women referred to each invasive cervical cancer treatment and management service **Denominator**: Total [expected] number of women receiving diagnostics	Critical_Assumptions_TA
BASIC RE-SCREENING TIMING ASSUMPTIONS			
Years until re-screening (last result normal)	Screening interval (in years) for women receiving a negative screening test result (for HIV+ and HIV- women, where timing is different)	WHO recommendations for screening intervals can be found in the *Guidelines for screening and treatment of precancerous lesions for cervical cancer prevention* [WHO, 2013].	Critical_Assumptions_TA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Years until re-screening (last screening resulted in referral)	Screening interval (in years) for women referred at screening for further evaluation and/or treatment	WHO recommendations for screening intervals can be found in the *Guidelines for screening and treatment of precancerous lesions for cervical cancer prevention* [WHO, 2013].	Critical_Assumptions_TA
ANNUAL POPULATION COUNTS			
Annual population counts by subnational level and population segment and category	"Annual" means for each year being costed. "Subnational level" refers to the second administrative level named in the *Names of second administrative level units* input. "Segment" refers to the larger disaggregation or breakdown of the target population. "Category" refers to the second level of disaggregation within each target population segment. Note: there is also an option to enter the HIV prevalence rate, for more precise estimation	Example: Number of HIV+ women, aged 15–24 in the Western Region; Number of HIV+ women, aged 25–49 in the Western Region; Number of HIV- women, aged 25–49 in the Western Region; Number of HIV+ women, aged 15–24 in the Mountain Region; Number of HIV+ women, aged 25–49 in the Mountain Region; Number of HIV- women, aged 25–49 in the Mountain Region; etc. for all Regions and target population disaggregates.	Critical_Assumptions_TA
ECONOMIC ASSUMPTIONS			
Currency codes and exchange rates	For each year being costed		Economic_Assumptions_TA
Annual discount rate	The interest rate used to determine the present value of future cash flows in standard discounted cash flow analysis for each year being costed	Generic rate = 3%–5%	Economic_Assumptions_TA
MASTER PRICE LIST			
Master currency	Select the currency which will be applied to all cost assumptions in this section		Master_Price_List_BA
Hospital level personnel costs		For each personnel type at the hospital level, input the following: position/cadre/ specialty name; year of price listing; salary and benefits package period (usually 1 month); unit for specifying quantity; price per package (matches package period)	Master_Price_List_BA
Personnel costs at other health facilities		For each personnel type at other health facility levels, input the following: position/ cadre/specialty name; year of price listing; salary and benefits package period (usually 1 month); unit for specifying quantity; price per package (matches package period)	Master_Price_List_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Equipment prices	This is the master list of all equipment required for cervical cancer services (screening, precancerous lesion treatment, diagnostics, invasive cervical cancer treatment and management). See Section 4 Implementation Tools and Materials for lists of minimum equipment for each service.	For each type of equipment, input the following: equipment name; year of pricing; name of package/group that equipment is sold by; price per package/group; unit for specifying quantity; the number of pieces in the package/group; and useful life years of equipment. Equipment costs should be costed for the proportion of use for cervical cancer. Example: if a radiotherapy machine is used 1/3 of the time for cervical cancer, the user should designate the number of equipment units as 0.33 rather than 1.	Master_Price_List_BA
Supply prices	This is the master list of all supplies required for cervical cancer services (screening, precancerous lesion treatment, diagnostics, invasive cervical cancer treatment and management). See Section 4 Implementation Tools and Materials for lists of minimum supplies for each service.	For each type of supply, input the following: name of supply; year of pricing; name of package/group that supply is sold by; price per package/group; unit for specifying quantity; and number of pieces in the package/group.	Master_Price_List_BA
Other direct costs	Other direct costs for providing services, such as laboratory testing, fuel, etc.	For each entry, input the following: name of item; year of pricing; name of package/group item is sold by; price per package/group; unit for specifying quantity; number of pieces per package/group.	Master_Price_List_BA
SERVICE ASSUMPTIONS			
SCREENING ASSUMPTIONS The tool allows entry of input for the group of assumptions below for up to three different cervical cancer screening methods. Prior to determining each input, users should list the names and short codes for each individual screening method that will be provided in the country for each year being costed. All assumption inputs should then be provided for each screening method. The names and short codes, and assumptions for each screening method will be entered into the tool to create screening method-specific groupings.			
Proportion of all screenings performed using a specific screening method	The proportion of screenings performed using one screening method. If only one screening method is in use (e.g. VIA), the proportion will be 100%. Same as *Initial screening method* distribution critical assumption.	**Numerator**: [Estimated] number of screenings conducted using a specific methodology **Denominator**: Total number of [expected] screenings This should be provided for each individual screening method in use.	Screening_Assumptions_BA
Average number of service days per year for each facility type	The average number of days that each facility type provides a specific screening service per year.	Weighted averages may be used as needed (for example, where most facilities of a specific type offer services 1 day per week, but one facility offers services 3 days per week).	Screening_Assumptions_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Average number of service hours per service for each facility type	The average number of hours that each facility type provides the screening service per day.	Weighted averages may be used as needed (for example, where most facilities of a specific type offer services 2 hours per day on 1 day per week, but one facility offers services 8 hours per day for 3 days per week).	Screening_Assumptions_BA
Average number of minutes per service hour	The average number of minutes per hour that each facility type provides the screening service.	This will typically be 60 minutes; however, issues such as stockouts or rotating personnel may affect the average for service days, service hours, and minutes per service hour.	Screening_Assumptions_BA
Average number of minutes per service	The average number of minutes required to perform the screening service at each facility type.	Time motion study using systematic observation of the performance of each diagnostic service is suggested in order to establish a standard time	Screening_Assumptions_BA
Prerequisite equipment required to provide the screening service	This list tracks the required equipment or infrastructure which is already in place – typically for common use – and therefore does not need to be costed under the cervical cancer programme. An example is a private examination area with examination table/ gynaecological couch, etc.	Equipment entered into this list will **not** be included in costing – equipment to be included should be entered as an input under *List of equipment required to outfit a site* below.	Screening_Assumptions_BA
Number of minutes required by each personnel type for pre-procedure activities at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of pre-procedure activities is suggested in order to establish a standard time	Screening_Assumptions_BA
Number of minutes required by each personnel type to perform the procedure at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of screening procedure is suggested in order to establish a standard time	Screening_Assumptions_BA
Number of minutes required by each personnel type for post-procedure activities at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of post-procedure activities is suggested in order to establish a standard time	Screening_Assumptions_BA
Supplies required to perform screening procedure	This input is required to calculate the cost per procedure. List separately any supplies required for procedure that should not be included in costing (e.g. standard basic supplies also used for procedures other than screening).	Within the group of assumptions for each screening method, input the following for each required supply: name of supply, number of units required per procedure.	Screening_Assumptions_BA
Equipment required to outfit a site to perform the screening procedure	This input supplements the Master Price List inputs in order to calculate the initial investment, annualized financial and annualized economic costs per site.	Within the group of assumptions for each screening method, input the number of units of equipment required to outfit a site.	Screening_Assumptions_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Annual equipment maintenance add-on	Percentage of total costs for annual equipment maintenance		Screening_Assumptions_BA
Other direct costs required for a site to perform the screening procedure (including laboratory tests)	This input is required to calculate the cost per procedure.	Within the group of assumptions for each screening method, enter the number of units required per procedure for each item.	Screening_Assumptions_BA
Number of facilities of each facility type, in each subnational unit that will be providing a screening service each year	This input should be provided for each year being costed. The number of facilities currently providing services can be entered under "Pre-existing". This worksheet allows input of this information for up to three different screening methods.		Screening_Assumptions_Annual_TA
DIAGNOSTIC ASSUMPTIONS The tool allows entry of input for assumptions for all diagnostic pathology services, i.e. colposcopic biopsy, endocervical curettage, histopathology, etc.			
Precentage of screened population applicable	Same as critical assumption *Screening referral proportions* for diagnostics.	**Numerator**: [Estimated] number of screened women referred for each treatment intervention or diagnostic service **Denominator**: Total [expected] number of women screened	Diagnostic_Assumptions_BA
Referral attrition rate	Percentage of women referred for diagnostics who do not attend the referral visit.	**Numerator**: [Estimated] number of screened women referred for diagnostic pathology who did not attend the referral visit **Denominator**: Total [estimated] number of screened women referred for diagnostic pathology	Diagnostic_Assumptions_BA
Average number of service days per year for each facility type	The average number of days that each facility type provides diagnostic services per year.	Weighted averages may be used as needed (for example, where most facilities of a specific type offer services 1 day per week, but one facility offers services 3 days per week).	Diagnostic_Assumptions_BA
Average number of service hours per service for each facility type	The average number of hours that each facility type provides diagnostic services per day.	Weighted averages may be used as needed (for example, where most facilities of a specific type offer services 2 hours per day on 1 day per week, but one facility offers services 8 hours per day for 3 days per week).	Diagnostic_Assumptions_BA
Average number of minutes per service hour	The average number of minutes per hour that each facility type provides diagnostic services.	This will typically be 60 minutes; however, issues such as stockouts or rotating personnel may affect the average for service days, service hours, and minutes per service hour.	Diagnostic_Assumptions_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Average number of minutes per service	The average number of minutes required to perform a diagnostic service at each facility type.	Time motion study using systematic observation of the performance of each diagnostic service is suggested in order to establish a standard time	Diagnostic_Assumptions_BA
Prerequisite equipment required to provide diagnostic services	This list tracks the required equipment or infrastructure which is already in place – typically for common use – and therefore does not need to be costed under the cervical cancer programme.	Equipment entered into this list **will not** be included in costing – equipment to be included should be entered as an input under *List of equipment required to outfit a site* below.	Diagnostic_Assumptions_BA
Number of minutes required by each personnel type for pre-procedure activities at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of pre-procedure preparatory activities is suggested in order to establish a standard time	Diagnostic_Assumptions_BA
Number of minutes required by each personnel type to perform the procedure at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of diagnostic procedures is suggested in order to establish a standard time	Diagnostic_Assumptions_BA
Number of minutes required by each personnel type for post-procedure activities at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of post-procedure activities is suggested in order to establish a standard time	Diagnostic_Assumptions_BA
Supplies required to perform diagnostic pathology procedures	This input is required to calculate the cost per procedure. Separately list any supplies required that should not be included in costing (e.g. standard basic supplies used for non-cervical cancer diagnostic procedures).	For each supply required, input the following: name of supply, number of units required per procedure.	Diagnostic_Assumptions_BA
Equipment required to outfit a site to perform diagnostic pathology	This input supplements the Master Price List inputs in order to calculate the initial investment, annualized financial and annualized economic costs per site.	Input the name of the equipment and number of units required to outfit a site to perform diagnostics.	Diagnostic_Assumptions_BA
Annual equipment maintenance add-on	Percentage of total costs for annual equipment maintenance		Diagnostic_Assumptions_BA
Other direct costs required for a site to perform diagnostic pathology	This input is required to calculate the cost per procedure and includes any laboratory fees for processing diagnostic samples.	For each type of item, enter the number of units required per procedure.	Diagnostic_Assumptions_BA
Number of facilities of each facility type, in each subnational unit that will be providing diagnostic pathology services each year	This input should be provided for each year being costed. The number of facilities currently providing services can be entered under 'Pre-existing'.		Diagnostic_Assumptions_Annual_TA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
INTERVENTION ASSUMPTIONS The tool allows entry of input for the group of assumptions below for up to seven different customizable precancerous lesion and invasive cervical cancer treatment and management interventions – including palliative care. Prior to determining each input below, users should list the names and short codes for each individual intervention that will be provided in the country for each year being costed. All assumption inputs should then be provided for each treatment intervention. The names and short codes, and assumptions for each intervention will be entered into the tool to create intervention-specific groupings.			
Percentage of screened population applicable	Same as critical assumption *Screening referral proportions* for each individual treatment intervention (should autopopulate).	**Numerator**: [Estimated] number of screened women referred for each treatment intervention **Denominator**: Total [expected] number of women screened	Intervention_Assumptions_BA
Referral attrition rate	Percentage of women referred for each type of treatment intervention who do not attend the referral visit	**Numerator**: [Estimated] number of screened women referred for each treatment intervention who did not attend the referral visit **Denominator**: Total [estimated] number of screened women referred for each treatment intervention	Intervention_Assumptions_BA
Average number of service days per year for each facility type	The average number of days in a year that each facility type provides each treatment intervention. Required to estimate Annual Capacity per Facility Type for each treatment intervention.	Weighted averages may be used as needed (for example, where most facilities of a specific type offer services 1 day per week, but one facility offers services 3 days per week).	Intervention_Assumptions_BA
Average number of service hours per service day for each facility type	The average number of hours that each facility type provides each treatment intervention (on the days when they provide that service). Required to estimate Annual Capacity per Facility Type for each treatment intervention.	Weighted averages may be used as needed (for example, where most facilities of a specific type offer services 2 hours per day on 1 day per week, but one facility offers services 8 hours per day for 3 days per week).	Intervention_Assumptions_BA
Average number of minutes per service hour	The average number of minutes per service hour that each facility type provides each treatment intervention. Required to estimate Annual Capacity per Facility Type for each treatment intervention.	This will typically be 60 minutes; however, issues such as stockouts or rotating personnel may affect the average for service days, service hours, and minutes per hour.	Intervention_Assumptions_BA
Average number of minutes per service	The average number of minutes required to provide each treatment intervention service – including pre-procedure and post-procedure activities – at each facility type. Required to estimate Annual Capacity per Facility Type for each treatment intervention.	Time motion study using systematic observation of the performance of each treatment intervention service is suggested in order to establish a standard time	Intervention_Assumptions_BA
Prerequisite equipment required to provide each treatment intervention	This list tracks the required equipment or infrastructure which is already in place – typically for common use – and therefore does not needed to be costed under the cervical cancer programme. An example is a standard operating theatre with bed, anesthesiology equipment, etc.	Equipment entered into this list **will not** be included in costing – equipment to be included should be entered as an input under *List of equipment required to outfit a site* below.	Intervention_Assumptions_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Number of minutes required by each personnel type for pre-procedure activities at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of pre-procedure preparatory activities for each treatment intervention is suggested in order to establish a standard time	Intervention_Assumptions_BA
Number of minutes required by each personnel type to perform each treatment procedure at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of the performance of each treatment intervention procedure is suggested in order to establish a standard time	Intervention_Assumptions_BA
Number of minutes required by each personnel type for post-procedure activities at each health facility type	Required to estimate time and cost per procedure	Time motion study using systematic observation of post-procedure activities for each treatment intervention is suggested in order to establish a standard time	Intervention_Assumptions_BA
Supplies required to perform each type of treatment intervention	This input is required to calculate the cost per procedure. Separately list any required supplies that should not be included in costing (e.g. standard supplies also used for non-cervical cancer procedures).	Within the group of assumptions for each type of treatment intervention, input the following for each required supply: name of supply, number of units required per procedure.	Intervention_Assumptions_BA
Equipment required to outfit a site to perform each type of treatment intervention	This input supplements the Master Price List inputs in order to calculate the initial investment, annualized financial and annualized economic costs per site.	Within the group of assumptions for each treatment intervention, input the name of the equipment and number of units required to outfit a site to perform that intervention.	Intervention_Assumptions_BA
Annual equipment maintenance add-on	Percentage of total costs for annual equipment maintenance		Intervention_Assumptions_BA
Other direct costs required for a site to perform each type of treatment intervention	This input is required to calculate the cost per procedure.	Within the group of assumptions for each treatment intervention, enter the number of units required per procedure for each item.	Intervention_Assumptions_BA
Number of facilities of each facility type, in each subnational unit that will be providing each treatment intervention	This input should be provided for each year being costed.	The number of facilities currently providing treatment and management services should be entered under “Pre-existing”.	Intervention_Assumptions_TA
NON-SERVICE ASSUMPTIONS			
MICROPLANNING Microplanning activities are those focused at lower levels of the health system to ensure nationally endorsed interventions are implemented in a way that meets local needs (e.g. targeted operational planning meetings at the national, subnational, facility and local community level). The tool includes a worksheet to capture the assumptions below for up to four types of microplanning activities. Users should list the names for each type of microplanning activity and provide all assumption inputs below for each type. The tool also includes a separate worksheet to assist with estimating the financial and economic costs for meetings (including microplanning meetings), with space for up to three customizable meetings – the assumptions for input into the separate meeting budget worksheet are listed under the Meeting and Training Budget Planning section below.			
Applicable currency	Select the currency which will be applied to all cost assumptions entered into the Microplanning section		Non-Service_Assumptions_TA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Financial cost of microplanning activity unit for each activity type	The financial cost is the outlay or direct expenditures invested in the service [e.g. facilitators' fees, travel allowance, venue rental, etc.], but does not include donated goods or salaried personnel costs.	Each type of microplanning activity (e.g. national microplanning meetings, district microplanning meetings, etc.) should be listed, with financial costs per unit (i.e. costs for one meeting) provided for each type.	Non-Service_Assumptions_TA
Economic cost of a microplanning activity unit for each activity type	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Each type of microplanning activity (e.g. national microplanning meetings, district microplanning meetings, etc.) should be listed, with economic costs per unit (i.e. costs for one meeting) provided for each type.	Non-Service_Assumptions_TA
Assumed number of microplanning activities to occur each year	This number will be used as a multiplier to estimate the overall financial and economic costs of each type of microplanning activity for each year being costed.	The number of expected microplanning activities of each type should be listed for each year being costed.	Non-Service_Assumptions_TA
TRAINING ACTIVITIES Training activities may include clinical trainings for providers, infection control trainings, data management trainings, etc. at the national, subnational or facility levels. The tool includes a worksheet to capture the assumptions below for up to seven types of training activities. Users should list the names for each type of training activity and provide all assumption inputs below for each type. The tool also includes a separate worksheet to assist with estimating the financial and economic costs for training activities, with space for up to four customizable trainings – the assumptions for input into the separate training budget worksheet are listed under the Meeting and Training Budget Planning section below.			
Applicable currency	Select the currency which will be applied to all cost assumptions entered into the Training section.		Non-Service_Assumptions_TA
Maximum number of participants per training	This number will be used as a multiplier to estimate the financial and economic costs per unit for each type of training.		Non-Service_Assumptions_TA
Financial cost of a training activity unit for each activity type	The financial cost is the outlay or direct expenditures invested in the service [e.g. trainers' fees, travel allowance, venue rental, etc.], but does not include donated goods or salaried personnel costs.	Each type of training activity (e.g. VIA, cryotherapy and data use training for providers; data management training, etc.) should be listed, with financial costs per unit (i.e. costs for one training) provided for each. The costs for one training should be estimated based on maximum number of participants per training.	Non-Service_Assumptions_TA
Economic cost of each training activity for each activity type	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Each type of training activity (e.g. VIA, cryotherapy and data use training for providers; data management training, etc.) should be listed, with economic costs per unit (i.e. costs for one training) provided for each. The costs for one training should be estimated based on maximum number of participants per training.	Non-Service_Assumptions_TA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Planned number of training activities to occur each year	This number will be used as a multiplier to estimate the overall financial and economic costs of each type of training activity for each year being costed.	The number of expected training activities for each type of training should be listed for each year being costed	Non-Service_Assumptions_TA
SOCIAL MOBILIZATION AND COMMUNICATION The tool allows entry of up to four types of social mobilization activities, up to four types of introductory communication support packages, and up to four types of continuing communication support packages. Data collection for this section should begin by listing all planned activities and communication packages, and the associated line item financial and economic costs for one activity or package (i.e. one unit). The activities can then be further grouped into categories/types as needed to enable entry of the unit cost for each type into the tool.			
Applicable currency	Select the currency which will be applied to all cost assumptions entered into the social mobilization section		Non-Service_Assumptions_TA
Financial cost of social mobilization activity unit for each activity type	The financial cost is the outlay or direct expenditures invested in the service (e.g. airtime, transport, etc.) but does not include donated goods or salaried personnel costs.	Each type of social mobilization activity (e.g. patient recruitment at the facility level, patient recruitment at the district level, patient follow-up at the facility level, etc.) should be listed, with financial costs per unit (i.e. costs for one activity) provided for each type.	Non-Service_Assumptions_TA
Economic cost of a social mobilization activity unit for each activity type	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Each type of social mobilization activity (e.g. patient recruitment at the facility level, patient recruitment at the district level, patient follow-up at the facility level, etc.) should be listed, with financial costs per unit (i.e. costs for one activity) provided for each type.	Non-Service_Assumptions_TA
Assumed number of social mobilization activities to occur each year	This number will be used as a multiplier to estimate the overall financial and economic costs of each type of social mobilization activity for each year being costed.	The number of expected social mobilization activities of each type should be listed for each year being costed.	Non-Service_Assumptions_TA
Financial cost of an introductory communication support package unit for each package type	The financial cost is the outlay or direct expenditures invested in the service (e.g. development and production of brochures and posters, distribution/transport, development and production of radio and TV spots, etc.) but does not include donated goods or salaried personnel costs.	Each type of introductory communication support package (e.g. national programme launch, provincial programme launch, initial facility IEC/BCC package (production of brochures and posters for facilities, etc.) should be listed, with financial costs per unit (i.e. costs for one package) provided for each type.	Non-Service_Assumptions_TA
Economic cost of an introductory communication support package unit for each package type	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Each type of introductory communication support package (e.g. National programme launch, Provincial programme launch, initial facility IEC/BCC package [production of brochures and posters for facilities], etc.) should be listed, with financial costs per unit (i.e. costs for one package) provided for each type.	Non-Service_Assumptions_TA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Financial cost of a continuing communication support package unit for each package type	The financial cost is the outlay or direct expenditures invested in the service (e.g. re-printing, distribution/transport, airing radio and TV spots, etc.) but does not include donated goods or salaried personnel costs.	Each type of continuing communication support package (e.g. screening promotion campaign, re-screening campaign, campaign to reduce loss to follow-up, etc.) should be listed, with financial costs per unit (i.e. costs for one package) provided for each type.	Non-Service_Assumptions_TA
Economic cost of a continuing communication support package unit for each package type	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Each type of continuing communication support package (e.g. Screening promotion campaign, Re-screening campaign, Campaign to reduce loss to follow-up, etc.) should be listed, with financial costs per unit (i.e. costs for one package) provided for each type.	Non-Service_Assumptions_TA
Assumed number of introductory communication support packages of each type per year	This number will be used as a multiplier to estimate the overall financial and economic costs of each type of introductory communication support package for each year being costed.	The number of expected introductory communication support packages of each type should be listed for each year being costed. While there is typically only one national programme launch, there may be several launches at the subnational levels when a phased approach to service introduction or scale-up is being employed.	Non-Service_Assumptions_TA
Assumed number of continuing communication support packages of each type per year	This number will be used as a multiplier to estimate the overall financial and economic costs of each type of continuing communication support package for each year being costed.	The number of expected continuing communication support packages of each type should be listed for each year being costed.	Non-Service_Assumptions_TA
SUPERVISION, MONITORING AND EVALUATION The tool allows the input of up to six types of supervisory team visits, up to five types of monitoring activities, and up to four types of evaluation activities. Data collection for this section should begin by listing all planned visits and activities, and the associated line item financial and economic costs for one visit or activity (i.e. one unit). The visits and activities can then be further grouped into categories/types as needed to enable entry of the unit cost for each type into the tool.			
Applicable currency	Select the currency which will be applied to all cost assumptions entered into the supervision, monitoring and evaluation section		Non-Service_Assumptions_TA
Estimated unit financial cost for each type of supervision team visit	The financial cost is the outlay or direct expenditures invested in the service (e.g. airtime, transport, printing, etc.) but does not include donated goods or salaried personnel costs.	Each type of supervision team visit (e.g. national supervision team yearly visit, subnational supervision team visit, district supervision team visit, etc.) should be listed, with financial costs per unit (i.e. costs for one visit) provided for each type.	Non-Service_Assumptions_TA
Estimated unit economic cost for each type of supervision team visit	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Each type of supervision team visit (e.g. national supervision team yearly visit, subnational supervision team visit, district supervision team visit, etc.) should be listed, with financial costs per unit (i.e. costs for one visit) provided for each type.	Non-Service_Assumptions_TA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Percentage allocated to screening and treatment	The proportion of the supervisory visit that will be allocated to cervical cancer screening and treatment. This number will be used as a multiplier to estimate the overall financial and economic costs of each type of supervision team visit for each year being costed.	The proportion of the facility supervisory visit that will be allocated to cervical cancer screening and treatment.	Non-Service_Assumptions_TA
Assumed number of supervision team visits of each type per year	This number will be used as a multiplier to estimate the overall financial and economic costs of each type of supervision team visit for each year being costed.	The number of expected supervision team visits of each type should be listed for each year being costed.	Non-Service_Assumptions_TA
Estimated unit financial cost for each type of monitoring activity per year	The financial cost is the outlay or direct expenditures invested in the service (e.g. data systems, printing, etc.) but does not include donated goods or salaried personnel costs.	Each type of monitoring activity (e.g. initial development of standardized indicators, ongoing programme monitoring, etc.) should be listed, with financial costs per unit (i.e. costs for one activity) provided for each type for each year being costed. The costs for developing and introducing a monitoring activity (e.g. developing or aligning data systems, printing new registers or data collection and summary forms, etc.) are typically higher than the costs of continuing the activity in subsequent years.	Non-Service_Assumptions_TA
Estimated unit economic cost for each type of monitoring activity per year	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other “hidden” costs.	Each type of monitoring activity (e.g. initial development of standardized indicators, ongoing programme monitoring, facility readiness assessments, etc.) should be listed, with financial costs per unit (i.e. costs for one activity) provided for each type for each year being costed. The costs for developing and introducing a monitoring activity (e.g. developing or aligning data systems, printing new registers or data collection and summary forms, etc.) are typically higher than the costs of continuing the activity in subsequent years.	Non-Service_Assumptions_TA
Estimated unit financial cost for each type of evaluation per year	The financial cost is the outlay or direct expenditures invested in the service (e.g. planning meetings, printing, etc.) but does not include donated goods or salaried personnel costs.	Each type of evaluation (e.g. national programme evaluation, feasibility study, mid-programme evaluation, data quality audit, etc.) should be listed, with financial costs per unit (i.e. costs for one evaluation) provided for each type for each year being costed.	Non-Service_Assumptions_TA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Estimated unit economic cost for each type of evaluation per year	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Each type of evaluation (e.g. national programme evaluation, feasibility study, mid-programme evaluation, data quality audit, etc.) should be listed, with financial costs per unit (i.e. costs for one evaluation) provided for each type for each year being costed.	Non-Service_Assumptions_TA
OTHER RECURRENT AND CAPITAL NON-SERVICE DELIVERY COSTS The tool allows the input of up to six types of recurrent non-service delivery costs, and up to six types of capital non-service delivery costs. Data collection for this section should begin by listing all planned recurrent and capital non-service delivery costs, and the associated line item financial and economic costs for one unit (e.g. one vehicle for the supervision team, one programme review meeting, leasing office space for national or subnational programme management, airtime for supervisors, etc.). The unit costs can then be further grouped into categories/types if needed to enable entry of the unit cost for each category/type into the tool.			
Applicable currency	Select the currency which will be applied to all cost assumptions entered into the recurrent and capital non-service delivery costs section		Non-Service_Assumptions_TA
Financial cost of recurrent non-service delivery units for each unit type	The financial cost is the outlay or direct expenditures invested in the service (e.g. airtime, transport, printing, etc.) but does not include donated goods or salaried personnel costs.	Recurrent non-service delivery programme costs include programme administration, programme review meetings, programme re-costing activities, etc. Each type of recurrent non-service delivery programme costs should be listed, with financial costs per unit provided for each type.	Non-Service_Assumptions_TA
Economic cost of recurrent non-service delivery units for each unit type	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Recurrent non-service delivery programme costs include programme administration, programme review meetings, programme re-costing activities, etc. Each type of recurrent non-service delivery programme costs should be listed, with financial costs per unit provided for each type.	Non-Service_Assumptions_TA
Assumed number of recurrent non-service delivery unit costs each year	This number will be used as a multiplier to estimate the overall financial and economic costs of each unit of recurrent non-service delivery cost categories for each year being costed.	The number of expected recurrent non-service delivery units of each type should be listed for each year being costed.	Non-Service_Assumptions_TA
Financial cost of capital non-service delivery units for each unit type	The financial cost is the outlay or direct expenditures invested in the service (e.g. vehicles, computers, etc.) but does not include donated goods or salaried personnel costs.	Capital non-service delivery programme costs include vehicles for supervision teams, computers, etc. Each type of capital non-service delivery programme cost should be listed, with financial costs per unit provided for each type.	Non-Service_Assumptions_TA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Economic cost of capital non-service delivery units for each unit type	The economic cost includes the outlay or direct expenditures plus the value of donated goods, salaried personnel costs and other "hidden" costs.	Capital non-service delivery programme costs include vehicles for supervision teams, computers, etc. Each type of capital non-service delivery programme cost should be listed, with financial costs per unit provided for each type.	Non-Service_Assumptions_TA
Assumed number of capital non-service delivery unit costs each year	This number will be used as a multiplier to estimate the overall financial and economic costs of each unit of capital non-service delivery cost categories for each year being costed.	The number of expected capital non-service delivery units of each type should be listed for each year being costed.	Non-Service_Assumptions_TA
MEETING AND TRAINING BUDGET PLANNING The tool includes separate worksheets to assist in planning the budget and estimating costs for meetings (including microplanning meetings) and trainings, with space for up to three customizable meetings and their cost assumptions and up to four customizable training activities and their cost assumptions.			
MEETING BUDGET PLANNING The tool includes a worksheet to assist with planning the budget for meetings (including microplanning meetings), with space for up to three customizable meetings and their cost assumptions. Prior to determining each input below, users should list the names for each individual meeting. All assumption inputs should then be provided for each meeting. The names and assumptions for each meeting can then be entered into the worksheet as meeting-specific groupings. The overall financial and economic costs, as well as any other required inputs, for each type of microplanning meeting can then be transferred by the costing facilitator over to the Non-Service Assumptions worksheet. Where more than three meetings require costing, the inputs may be deleted by the costing facilitator once relevant information has been transferred and new budget planning input may be entered into the worksheet.			
Applied currency	Select the currency which will be applied to all cost assumptions in this section		Meeting_Budget_Assumptions_BA
List of personnel types (or cadres) who will be **facilitating** the meeting	For each personnel type or cadres who will be facilitating, provide the following inputs: number who will be facilitating and number of days they will be facilitating. ***Note applicable to this group of assumptions**: Personnel types and cadres are context- and meeting type-dependent. Different personnel/cadres may have different costs associated with their facilitation and participation.*	Personnel types may include salaried and non-salaried or part-time employees, contractors, etc. Cadres may include professors, medical doctors, community health workers, etc.	Meeting_Budget_Assumptions_BA
Financial cost per person per day for each personnel type (or cadre) who will be **facilitating**	The financial cost is the outlay or direct expenditures invested in the service (e.g. fees, honorariums, etc.) but does not include donated goods or salaried personnel costs.	This number should reflect only direct costs for **personnel**. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Meeting_Budget_Assumptions_BA
Economic cost per person per day for each personnel type (or cadre) who will be **facilitating**	The economic cost includes the outlay or direct expenditures plus the value of salaried personnel costs and other "hidden" costs.	This number should reflect only direct and indirect costs for **personnel**. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Meeting_Budget_Assumptions_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
List of personnel types (or cadres) who will be **participating in** the meeting	Personnel types may include salaried and non-salaried or part-time employees, contractors, etc. Cadres may include professors, medical doctors, community health workers, etc.	For each personnel type or cadres who will be participating, provide the following inputs: number participating and number of days they will be participating.	Meeting_Budget_Assumptions_BA
Financial cost per person per day for each personnel type (or cadre) who will be **participating**	The financial cost is the outlay or direct expenditures invested in the service (e.g. facilitators' fees, honorariums, etc.) but does not include donated goods or salaried personnel costs.	This number should reflect only direct costs for personnel. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Meeting_Budget_Assumptions_BA
Economic cost per person per day for each personnel type (or cadre) who will be **participating**	The economic cost includes the outlay or direct expenditures plus the value of salaried personnel costs and other "hidden" costs.	This number should reflect only direct and indirect costs for personnel. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Meeting_Budget_Assumptions_BA
List of personnel types (or cadres) who will be **providing support to** the meeting	For each personnel type or cadres who will be participating, provide the following inputs: number providing support and number of days they will be providing support.	Personnel types may include salaried and non-salaried or part-time employees, contractors, etc. Cadres may include assistants or administrators, drivers, technical support staff, etc.	Meeting_Budget_Assumptions_BA
Financial cost per person per day for each personnel type (or cadre) who will be **providing support**	The financial cost is the outlay or direct expenditures invested in the service (e.g. over-time fees, honorariums, etc.) but does not include donated goods or salaried personnel costs.	This number should reflect only direct costs for personnel. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Meeting_Budget_Assumptions_BA
Economic cost per person per day for each personnel type (or cadre) who will be **providing support**	The economic cost includes the outlay or direct expenditures plus the value of salaried personnel costs and other "hidden" costs.	This number should reflect only direct and indirect costs for personnel. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Meeting_Budget_Assumptions_BA
List the types of allowances for each category of meeting attendees	These allowances may include: per diems, meal allowances, transport allowances, etc. Lodging costs should not be included, as they are a separate input. "Category" refers to the 3 categories subdividing the previous personnel assumptions: facilitators, participants, and support staff.	For each type of allowance under each attendee category, provide the following inputs: number of persons receiving that type of allowance; number of allowances per person (e.g. if the meal allowance is for 2 meals per day, and the meeting will last 2 days, the meal allowance per person would be 4); unit (per allowance) financial cost; and unit (per allowance) economic cost.	Meeting_Budget_Assumptions_BA
List the types of rooms needed for the meeting	This includes the meeting room or venue itself, as well as lodging for the attendees.	For each type of room, provide the following inputs: number of rooms needed; number of days (or nights, if rooms are for lodging) the room is required; unit (per room) financial cost; and unit (per room) economic cost.	Meeting_Budget_Assumptions_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
List the full meals and refreshments that will be provided at the meeting	"Full meals" refers to breakfast, lunch or dinner; "refreshments" refers to morning tea break, afternoon tea break, etc.	For each type of meal/ refreshments, provide the following inputs: number of persons who will be provided meals and refreshments; number of days they will be provided; unit (per person per meal/ refreshment) financial cost; and unit (per person per meal/ refreshment) economic cost. These inputs should not count any meals being paid for by participants through their per diem allowance.	Meeting_Budget_Assumptions_BA
List the materials and supplies required for the meeting	List each material or supply required for the meeting (e.g. notepads, folders, pens, etc.).	For each supply or material, provide the number needed, the unit financial cost and the unit economic cost.	Meeting_Budget_Assumptions_BA
List the equipment which will be rented for the meeting	List the equipment which will be rented for the meeting (e.g. audio equipment, projector, etc.).	For each piece of equipment, provide the following inputs: number of units needed; number of days of rental; the unit financial cost; and the unit economic cost.	Meeting_Budget_Assumptions_BA
List any other direct costs associated with the meeting	List any other direct costs associated with the meeting (e.g. fuel, equipment purchased, etc.).	For each item, provide the following inputs: number of units needed; the unit financial cost; and the unit economic cost.	Meeting_Budget_Assumptions_BA
TRAINING BUDGET PLANNING The tool includes a worksheet to assist with planning the budget for training activities, with space for up to four customizable training events and their cost assumptions. Prior to determining each input below, users should list the names for each individual training event. All assumption inputs should then be provided for each event. The names and assumptions for each training activity can then be entered into the worksheet as event-specific groupings. The overall financial and economic costs, as well as any other required inputs, for each type of training activity can then be transferred by the costing facilitator over to the Non-Service Assumptions worksheet. Where more than four events require costing, the inputs may be deleted by the costing facilitator once relevant information has been transferred and new budget planning input may be entered into the worksheet.			
Applied currency	Select the currency which will be applied to all cost assumptions in this section		Training_Budget_Tool_BA
List of personnel types (or cadres) who will be **facilitating** the training	For each personnel type or cadres who will be facilitating, provide the following inputs: number who will be facilitating, and number of days they will be facilitating. ***Note applicable to this group of assumptions**: Personnel types and cadres are context- and training type-dependent. Different personnel/cadres may have different costs associated with their facilitation and participation.*	Personnel types may include salaried and non-salaried or part-time employees, contractors, etc. Cadres may include professors, medical doctors, community health workers, etc.	Training_Budget_Tool_BA
Financial cost per person per day for each personnel type (or cadre) who will be **facilitating**	The financial cost is the outlay or direct expenditures invested in the service (e.g. fees, honorariums, etc.) but does not include donated goods or salaried personnel costs.	This number should reflect only direct costs for **personnel**. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Training_Budget_Tool_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
Economic cost per person per day for each personnel type (or cadre) who will be **facilitating**	The economic cost includes the outlay or direct expenditures plus the value of salaried personnel costs and other "hidden" costs.	This number should reflect only direct and indirect costs for **personnel**. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Training_Budget_Tool_BA
List of personnel types (or cadres) who will be **participating in** the training	Personnel types may include salaried and non-salaried or part-time employees, contractors, etc. Cadres may include professors, medical doctors, community health workers, etc.	For each personnel type or cadres who will be participating, provide the following inputs: number participating and number of days they will be participating.	Training_Budget_Tool_BA
Financial cost per person per day for each personnel type (or cadre) who will be **participating**	The financial cost is the outlay or direct expenditures invested in the service (e.g. facilitators' fees, honorariums, etc.) but does not include donated goods or salaried personnel costs.	This number should reflect only direct costs for personnel. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Training_Budget_Tool_BA
Economic cost per person per day for each personnel type (or cadre) who will be **participating**	The economic cost includes the outlay or direct expenditures plus the value of salaried personnel costs and other "hidden" costs.	This number should reflect only direct and indirect costs for personnel. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Training_Budget_Tool_BA
List of personnel types (or cadres) who will be **providing support to** the training	For each personnel type or cadres who will be participating, provide the following inputs: number providing support and number of days they will be providing support.	Personnel types may include salaried and non-salaried or part-time employees, contractors, etc. Cadres may include assistants or administrators, drivers, technical support staff, etc.	Training_Budget_Tool_BA
Financial cost per person per day for each personnel type (or cadre) who will be **providing support**	The financial cost is the outlay or direct expenditures invested in the service (e.g. over-time fees, honorariums, etc.) but does not include donated goods or salaried personnel costs.	This number should reflect only direct costs for personnel. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Training_Budget_Tool_BA
Economic cost per person per day for each personnel type (or cadre) who will be **providing support**	The economic cost includes the outlay or direct expenditures plus the value of salaried personnel costs and other "hidden" costs.	This number should reflect only direct and indirect costs for personnel. Travel allowances (per diem), lodging costs, venue costs, meals etc. are accounted for through a separate assumption.	Training_Budget_Tool_BA
List the types of allowances for each category of training attendees	These allowances may include: per diems, meal allowances, transport allowances, etc. Lodging costs should not be included, as they are a separate input. "Category" refers to the 3 categories subdividing the previous personnel assumptions: facilitators, participants, and support staff	For each type of allowance under each attendee category, provide the following inputs: number of persons receiving that type of allowance; number of allowances per person (e.g. if the meal allowance is for 2 meals per day, and the training will last 2 days, the meal allowance per person would be 4); unit (per allowance) financial cost; and unit (per allowance) economic cost.	Training_Budget_Tool_BA

Table continued

Input	Description	Notes on Calculation or Determination of Input	Worksheet Name
List the types of rooms needed for the training	This includes the training room or venue itself, as well as lodging for the attendees.	For each type of room, provide the following inputs: number of rooms needed, number of days (or nights, if rooms are for lodging) the room is required, unit (per room) financial cost, and unit (per room) economic cost.	Training_Budget_Tool_BA
List the full meals and refreshments that will be provided at the training	"Full meals" refers to breakfast, lunch or dinner; "refreshments" refers to morning tea break, afternoon tea break, etc.	For each type of meal/ refreshments, provide the following inputs: number of persons who will be provided meals and refreshments; number of days they will be provided; unit (per person per meal/ refreshment) financial cost; and unit (per person per meal/ refreshment) economic cost. These inputs should not count any meals being paid for by participants through their per diem allowance.	Training_Budget_Tool_BA
List the materials and supplies required for the training	List each material or supply required for the training (e.g. notepads, folders, pens, etc.).	For each supply or material, provide the number needed, the unit financial cost and the unit economic cost.	Training_Budget_Tool_BA
List the equipment which will be rented for the training	List the equipment which will be rented for the training (e.g. audio equipment, projector, etc.).	For each piece of equipment, provide the following inputs: number of units needed; number of days of rental; the unit financial cost; and the unit economic cost.	Training_Budget_Tool_BA
List any other direct costs associated with the training	List any other direct costs associated with the training (e.g. fuel, equipment purchased, etc.).	For each item, provide the following inputs: number of units needed, the unit financial cost and the unit economic cost.	Training_Budget_Tool_BA

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