



Ministry of Health

**National Action Plan for
Cervical Cancer
Prevention and Control
2019-2023**

**Department of Preventive Medicine
2019**

Forward

Cervical cancer is the most common cancer in women in Cambodia. It is estimated that 795 women die each year due to cervical cancer. However, these deaths can be prevented because cervical cancer is one of the most preventable and treatable forms of cancer if it is detected early and managed effectively.

The National Action Plan for Cervical Cancer Prevention and Control 2019- 2023 demonstrates the Royal Government of Cambodia in taking the issue of cervical cancer seriously, and is acting quickly to re-orient the efforts of our health system to deal with the new challenges posed by cervical cancer.

Two interventions are required to prevent cervical cancer – cervical screening with treatment of early abnormalities, and the Human Papilloma virus (HPV) vaccine. With high coverage of women in the population, these two interventions together can prevent almost 100% of cervical cancers in Cambodia.

The Ministry of Health urges all relevant national programmes and development partners to make cervical cancer a priority, and to work together to implement this national action plan to reduce mortality of disease in the Kingdom of Cambodia.

Phnom Penh, ¹²..... April 2019 ^{1/2}


Minister of Health
Prof. ENG HUOT
SECRETARY OF STATE

Acknowledgement

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Last but not least, we would like to thank WHO and UNFPA for their hard works and supports both technical and financial throughout the development process of this national action plan which will provide a strategic guidance for effective and sustainable cervical cancer control in Cambodia.

List of Acronyms and Abbreviations

DNA	Deoxyribonucleic acid
DPM	Department of Preventive Medicine
GAVI	Global Alliance for Vaccines and Immunization
HIV	Human Immunodeficiency Virus
HIS	Health Information System
HPV	Human Papilloma virus
HBCR	Hospital based Cancer Registry.
IARC	International Agency for Research on Cancer
IAEA	International Atomic Energy Agency
IEC	Information, Education and Communication
KAP	Knowledge, Attitude and Practices
KfW	Kreditanstalt für Wiederaufbau
LEEP	Loop electrosurgical excision procedure
MOH	Ministry of Health
MPA	Minimum Package of Activities
NAP-CCPC	National Action Prevention for Cervical Cancer Prevention and Control
NCDs	Non-communicable Diseases
NIP	National Immunization Programme
OD	Operational District
PHD	Provincial Health Department
PBCR	Population based Cancer Registry
RCC	Regional Cancer Centre
S-TWG	Sub Technical Working Group for Cervical Cancer Prevention and Control
UNFPA	United Nations Population Fund
VIA	Visual Inspection with Acetic Acid
WHO	World Health Organization

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1. Background

1.2 Policy

The National Strategic Plan for the Prevention and Control of Non communicable Diseases (NSP-NCD) (2013- 2020) recognizes that in the short to medium-term, the most cost-effective interventions for cancer in Cambodia are prevention and palliative care. The NSP-NCD identifies cervical cancer as the most urgent priority for cancer control and recommends the development of a two-pronged approach for prevention and treatment of cervical cancer. This includes cervical screening for early identification and treatment of abnormalities, and vaccination against Human Papilloma Virus (HPV). The World Health Organization (WHO) recognizes cervical cancer screening using Visual Inspection with Acid Acetic (VIA) and treatment of pre-cancerous cervical lesions as a “Best-Buy” intervention for NCD prevention & control due to highly cost-effective and feasible in low resource settings.

The incidence of cervical cancer and the proportion of women aged 30-49 years screened for cervical cancer at least once are both core indicators for Cambodia’s third Health Sector Plan (HSP3). Also, the NSP-NCD includes a target for 2020 mentioning that over 60% of women aged 30-49 years will have been screened for cervical cancer at least once. The Ministry of Health adopted cervical cancer screening guidelines for incorporation into both MPA Operational and Clinical Practice Guidelines.

The WHO also recognizes the scale-up of HPV vaccination as a “Best-Buy” that should be expanded when resources permit. The MOH National Immunization Program implemented an HPV vaccine demonstration project in Siem Reap and Svay Rieng provinces in 2017, with support of GAVI. Based on the demonstration project, it was recommended that HPV vaccine be scaled up and integrated into the national immunization program to provide better coverage of target population.

New policies, including policies to finance cervical cancer prevention and control programs over the mid- and long-term, will need to be developed to ensure this plan is fully implemented.

1.2 Situation

Magnitude of the problem

Cancer of cervix uteri is a preventable disease. Yet globally, it is estimated that over half a million women develop cancer of the cervix uteri each year, most of which is in developing countries (GLOBOCAN 2012). This disparity in incidence between developed and developing countries is because of a lack of equal access to effective screening and pre-cancer treatment programs. Although cancer of the cervix uteri has been diagnosed in women as young as 20-24, it is found more commonly in women aged between 40 and 54 years with the peak number being 45-49. Many of these women with cancer of the cervix are diagnosed in late stages at which time the cancer has spread and needs extensive surgery and/or radiotherapy. Globally, it is estimated that 275,000

women - crucial family caregivers - die each year due to cervical cancer¹. It is projected that deaths due to cervical cancer will increase by 25% over the next 10 years.

In Cambodia, cancer of cervix uteri is the most common cancer in women (GLOBOCAN 2012). It is estimated that 1512 women (age standardized incidence rate 23.8 per 100,000 women) develop the cervical cancer each year and 795 women die each year due to cervical cancer (age standardized mortality rate 13.4 per 100,000 women). Over 5 million Cambodian women (>15 years) are at risk for cervical cancer (ICO). Cambodia has the highest age standardized incidence rate and age standardized mortality rates in the Southeast Asia region.

The Sub-Technical Working Group (S-TWG) for Breast and Cervical Cancers serve as the multi-disciplinary body with the mandate to coordinate and oversee the development of the National Actional Plan for Cervical Cancer Prevention and Control (NAP-CCPC) and to advocate, along with the NCD Task Force, for resources needed to implement the NAP-CCPC. With representation from relevant national programs and departments within the Ministry of Health, national hospitals, key health partners and NGOs, this is the core group responsible for specific tasks such as development of the National guidelines, training curriculum, IEC materials, needs assessment... etc.

Cambodia has National Guideline for Cervical Cancer Screening 2008. While it is being updated, there remains a need for a comprehensive strategy that includes population-based HPV vaccination services. The demonstration project in the two provinces recommended to scale up the HPV vaccination and integrated into the existing national immunization program. This will require engagement with all relevant ministries to identify sustained resources to expand both screening and primary prevention programs as quickly as possible.

Cancer Treatment in Cambodia

The establishment of a state-of-the-art cancer center at Calmette Hospital will increase the capacity for cancer treatment, but remaining challenges must be met in building workforce capacity to effectively carry out screening and treatment programs at primary and tertiary level. Plans to establish a Regional Cancer Center (RCC) in Siem Reap Province for the North-Western region by 2020 and another RCC in Kratie Province for the North-Eastern part of the country by 2025, offer opportunities as these facilities can serve as training “Hubs” at subnational level.

Palliative Care, Pain relief and support

Palliative care, surgery, radiotherapy and chemotherapy will be provided at the National Cancer Center, with opioid drugs used for pain relief. However, the supply of opioid drugs for pain relief is not consistent – and often not available at district and health center level. Currently there is no system of providing or supporting community based palliative care. Currently, Douleurs Sans

¹ Global Inequalities in Cervical Cancer Incidence and Mortality are Linked to Deprivation, Low Socioeconomic Status, and Human Development. Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4948158/>

Frontières (DSF) has been implementing a pilot project of home-based palliative care service in Phnom Penh.

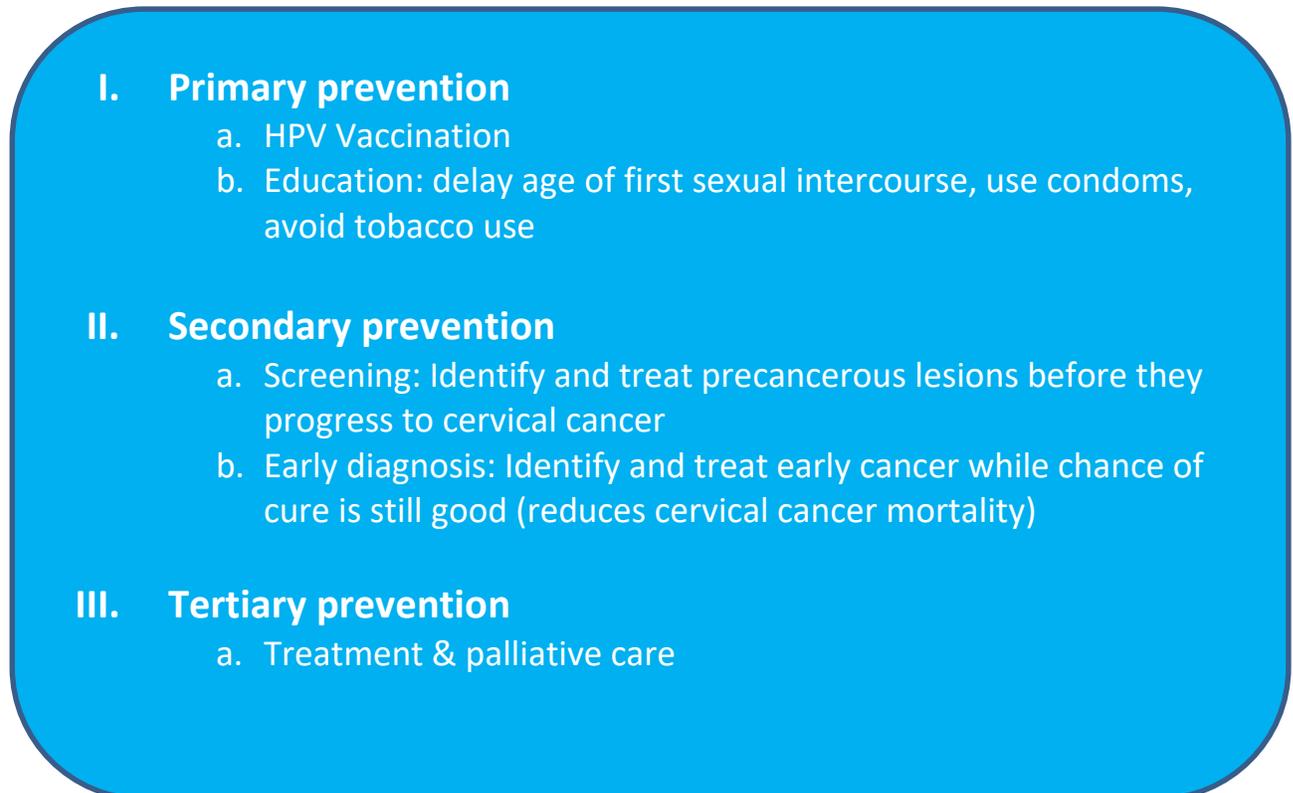
Health Information System

Accurate data on the cervical cancer incidence and mortality in Cambodia is currently not available as there are no cancer registries, either hospital based or population based. Current data are estimations based on data from neighbouring countries. Measuring the impact of a cancer prevention and control programme requires accurate data, so the NAP includes practical actions to establish cancer registries that will provide information on the burden of several cancers and the impact of programmes established to manage these cancers. As impact of programs on the burden of cancer is long term, it will be important to establish appropriate performance indicators that will indicate if the program is functioning as envisaged.

2. Strategies

Strategic Objective is to advocate and establish a population based comprehensive prevention programme for cervical cancer and strengthen linkages with referral centres in a phased manner throughout Cambodia over the next 5 years (Table 1).

Figure 1- Strategic Framework for cervical cancer prevention and control



Strategic Objective 1: To build awareness and political support through advocacy and create demand in the community by providing information education and communication.

1.1 To sensitize stakeholders on the importance of repositioning cervical cancer prevention as a public health intervention which is both equitable and sustainable.

1.2 To create demand by community mobilization through providing information education and communication.

Strategic Objective 2: To establish primary, secondary and tertiary prevention services nationally.

2.1 To prevent HPV infection (necessary causes of cervical cancer) using HPV Vaccines and promoting condom use as a dual protection method: Primary Prevention.

2.2 To prevent progression to cervical cancer by providing screening and treatment of pre-cervical cancer services: Secondary prevention.

2.3 To strengthen referral centres for diagnosis and treatment of complex pre-cervical cancer lesions and invasive cancer and palliative care and support for the patient and her family.

Strategic Objective 3: To ensure accountability and effective programme management.

3.1 To empower the S-TWG to be the multi-disciplinary cervical cancer prevention management team to ensure that the programme is planned, implemented and evaluated so the objectives of the programme are met.

3.2 To set up an ongoing mechanism to provide supportive supervision, monitor and evaluate the programme to enable identification of gaps and timely corrective action.

3. Action Plan

3.1 Scope of planning

Key reasons for prioritizing cervical cancer:

- **Magnitude of the problem in Cambodia**

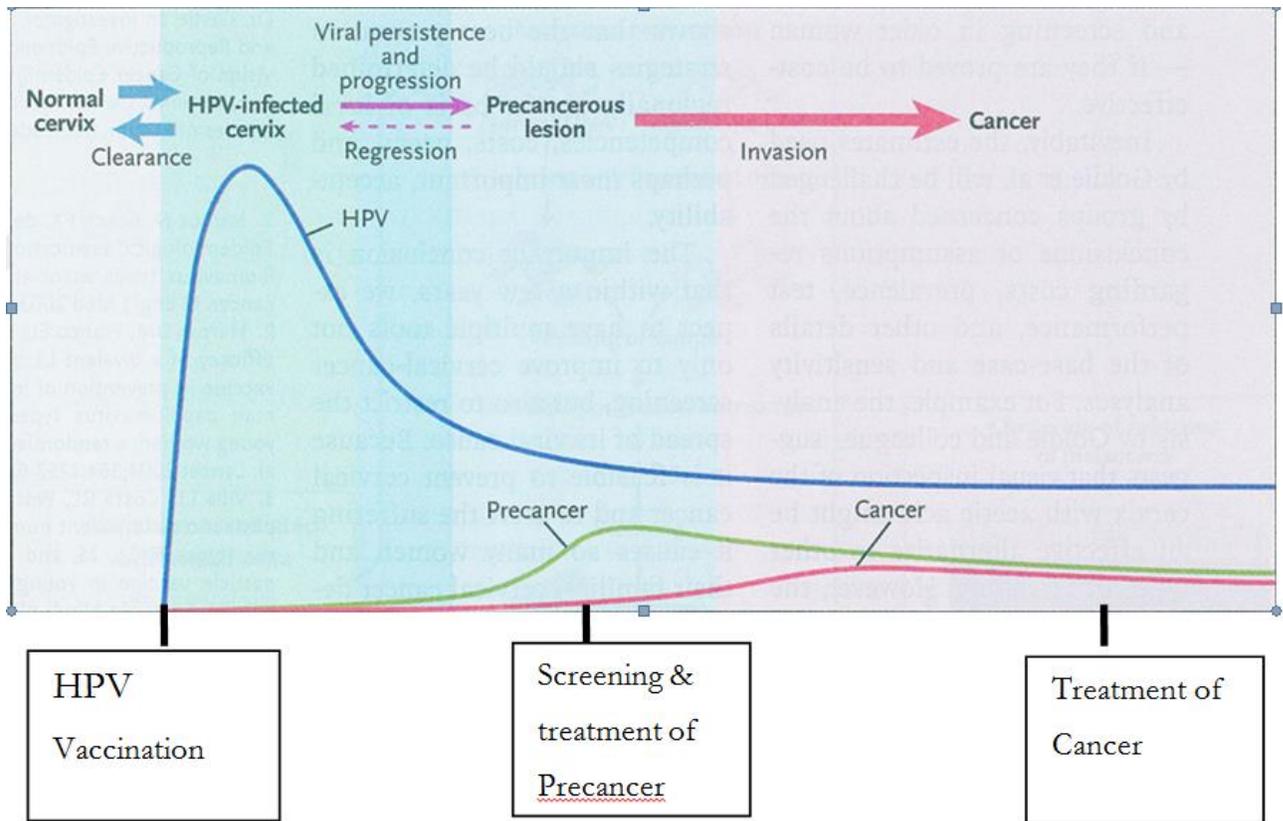
Cancer of the cervix uteri is the commonest cancer affecting Cambodian women. Over 5 million Cambodian women (>15 years) are at risk of cancer of the cervix uteri (ICO). Cancer of the cervix uteri not only affects the health and lives of women, but also their families and the community.

- **Cervical Cancer is an eminently preventable disease**

Exposure and persistence of high risks HPV genital infection has been established as a necessary cause of cancer of the cervix uteri. Two vaccines against these high-risk HPV types are safe and effective and currently available and licensed in Cambodia and available in the private sector to those who can afford getting HPV vaccination. Bivalent vaccine against high-risk HPV types 16 and 18 and quadrivalent vaccine against high-risk HPV types 16 and 18 and in addition HPV types 6 and 11 causing warts. Cost of one dose of the vaccine in Cambodia in the private sector excluding the cost of the service provider is US\$ 39.82 for the bivalent vaccine and US\$52.50 for the quadrivalent vaccine. HPV vaccination has been termed ‘‘Best Buy’’ i.e. expanded action when resources permit (World Economic Forum 2011).

- Cancer of the cervix uteri has recognized pre-cancer stage that can be detected and treated in a safe and effective manner.** The time between the appearance of pre-cancerous lesions and the occurrence of cancer is long (about ten years), leaving ample time for detection and treatment of the pre-cancerous lesions (Figure 2). Treatment of precancer lesions is simple and much less expensive compared to the management of invasive cancer. Screening and treatment of pre-cervical cancer have been termed as ‘‘Best Buy’’; highly cost effective in low resource setting (World Economic Forum 2011).

Figure 2- Continuum of care for cervical cancer prevention and treatment



Source: Adapted from World Health Organization (WHO), Comprehensive Cervical Cancer Control: A Guide to Essential Practice, 2nd edition, WHO Geneva 2014.

An effective population based-comprehensive cervical cancer prevention programme will be needed to reduce the burden of cervical cancer in Cambodia for the following reasons:

- **The impact of HPV vaccination will be realized only long term, that is 30 to 40 years from now.** Cambodia is eligible and has approval for GAVI support to set up population-based HPV vaccination demonstration project in 2 provinces, the whole of Svay Rieng Province and 2 OD in Siem Reap Province. Findings from the evaluation of the demonstration project showed that the HPV demonstration program was well-implemented, and all stakeholders supported the inclusion of HPV into the routine immunization system.² The existing immunization systems were able to easily cope with storage, distribution, and administration of an additional vaccine. A great advantage is that Cambodian immunization services have shown consistently high immunization coverage and have also established outreach mechanisms to increase access to immunization.
- Concomitantly, secondary prevention will be needed as currently available HPV vaccine only prevents the oncogenic HPV types 16 and 18 (which cause 70% of cervical cancer); hence even the vaccinated cohorts will need to be screened. In addition, all those women who are already too old to be eligible for vaccination will need to be screened and managed appropriately. Hence establishing screening and pre-cancer treatment services in the provinces, where HPV vaccination is and will be provided is important. It is crucial that treatment for cervical precancer is linked to screening services and accessibility to these services is assured. Integrating screening and treatment services into national health services will make broad access possible especially for the rural population, which constitutes 80% of Cambodia's population.
- Women with cancer of the cervix uteri will be identified during the provision of screening services and these women will need appropriate management. This is important both to comply with ethical requirements and to maintain community confidence and participation in the screening program. Hence centres capable of managing invasive cervical cancer will need to be strengthened and linked to the referral network.
- It is most likely that women identified with cervical cancer will be in the advanced stages of disease, and hence it is important to strengthen palliative care at all levels of care including community care.
- Knowing the impact of all these endeavours will be possible only if an effective monitoring and evaluation system is functioning. Initially, the program is likely to detect many of the undiagnosed prevalent cancers that may be reflected as an apparent increase in the incidence. There will be a stage-shift of the detected invasive cancers with more and more

² Preventing Cervical Cancer in Cambodia: Evaluating the HPV Vaccination Demonstration Project.
<https://blogs.cdc.gov/global/2018/04/24/preventing-cervical-cancer-in-cambodia/>

cases being diagnosed at earlier stages. As the pre-cervical cancers are detected and treated, there will be a gradual reduction in new cases of invasive disease. However, reduction in incidence and mortality as an impact of screening program may take over a decade to be evident. Timely corrective action using performance indicators requires accurate data collection, reliable data storage and user-friendly data retrieval. Having relevant indicators in the Cambodia Health Information System will enable regular data collection and retrieval and enable timely corrective action.

- These primary and secondary prevention services need to be integrated with national health services to ensure that services are both equitable and sustainable. It needs coordination, shared responsibility and shared resources and collective action of various Government ministries such as Ministry of Health, Ministry of Education, Youth, and Sport, Ministry of Women Affairs, and experts in the field of public health, gynaecologists, paediatricians, donors, etc. to synchronize their activities and work towards a common cause. Such a programme needing a multi-disciplinary team and concerted efforts will be effective only when it is led by the government.

Table 1- Strategic objectives for cervical cancer prevention and control

STRATEGIC OBJECTIVE 1	Building Awareness	1.1 Advocacy for stakeholders
		1.2 Creating community demand using IEC
STRATEGIC OBJECTIVE 2	Comprehensive cervical cancer prevention and control services including standardized training for services.	2.1 Primary Prevention: Population based HPV vaccination Promoting Condom use
		2.2 Secondary Prevention: Population based Screening and Treatment of cervical precancer and Strengthening referral services
		2.3 Strengthening Treatment of Cervical Cancer and Palliative Care
STRATEGIC OBJECTIVE 3	Accountability and Programme Management	3.1 National Multi-disciplinary Management team with National Coordinator
		3.2 Programme Monitoring & Evaluation

3.2 Matrix

Key Activities	Timeframe	Responsible
Strategic Objective 1.1 Advocacy		
To identify and engage national champions (high visibility) in activities.	2019 - ongoing	DPM/MOH
To involve national champions to lobby for establishment of a budget line for the cervical cancer program.	2019 -ongoing	DPM/MOH
To develop/adapt tools to demonstrate the cost benefit analysis and the deaths averted if the cervical cancer prevention program is implemented as a population based public health intervention. These will be shared in forums with the policy makers.	2019-2020	DPM/MOH
To conduct activities to involve professional and academic groups to lend their expertise and support to a population-based programme for the prevention and control of cervical cancer, particularly the building of provider capacity at various levels of healthcare system.	2019- ongoing	DPM/ MOH
To organize and conduct High-level Consultative Meeting with international and national participants, focusing on cervical cancer prevention and control.	2019 -2023	DPM/MOH
To conduct advocacy activities at provincial, district, and community level and get their buy in for cervical cancer prevention activities.	2019-ongoing	DPM/MOH
Strategic Objective 1.2: To create demand by community mobilization, providing information, education and communication		
To develop/ adapt, field test IEC material in local language for HPV vaccination and screening and treatment of precancerous lesions of the cervix linking the two interventions- job aids such as flip charts. In addition, screening and vaccination cards, pamphlets, flyers etc. as applicable to Cambodia.	2019-2020	NIP/DPM/MOH
To train providers in the use of these IEC material.	2019-2021	NIP/DPM/MOH
To develop and implement communication and mobilization action plan to schedule timing for these IEC activities prior to the delivery of these services.	2019-2021	DPM/MOH

To set up periodic evaluation utilizing KAP study to evaluate IEC activities.	2019-2021	DPM/MOH
Strategic Objective 2.1 Primary Prevention: HPV Vaccination & Condom Promotion		
To develop/update training materials and curriculum to support the scaling up the HPV vaccination.	2019	NIP/MOH
To develop selection criteria and time frame for step-wide expansion nationwide.	2019	NIP/DPM/MOH
To make full application to GAVI for co-funding of nation-wide HPV vaccination	2019	NIP/MOH
To develop national guidelines, IEC materials, and training guidelines based on the input from these demonstration projects.	2019	NIP/MOH
To conduct regular ongoing supportive supervision of the services with periodic evaluations using the indicators as detailed in the section on monitoring.	2019-2023	NIP/MOH
To promote condom use as a method to reduce HPV transmission.	2019 - ongoing	Reproductive Health
To scale up HPV vaccination services nationwide based on the evidence gathered from the demonstration project aiming for over 90% coverage.	2019-ongoing	NIP/MOH
To conduct needs assessment, procuring and distributing supplies, launching and providing services in the provinces where HPV vaccination are to be implemented.	2019-2020	NIP/MOH
To explore strategies for long-term financing for HPV vaccine program (e.g. dedicated percentage of tobacco or alcohol tax).	2020	NIP/MOH
To include key HPV vaccination indicators in Cambodia Health Information system to enable evaluating program performance.	2019-2020	NIP/MOH
Strategic Objective 2.2: To prevent cervical cancer by providing screening and treatment of cervical precancer services and planning for incremental coverage		
To review/update, disseminate a national guideline for the cervical cancer prevention based on the experience from the demonstration project including guidelines for special situations such as the screening for HIV positive women and screening pregnant women.	2019	DPM/ NIP/MOH

To develop selection criteria for expansion and the time frame for expansion.	2019	DPM/ Reproductive Health/ MOH
To scale up population-based screening and treatment of cervical precancer nationwide (selecting provinces where HPV Vaccination will also be implemented and planning for incremental coverage in 5 years).	2019-2023	PHD/MOH
To revise training material and conduct training of trainers (TOT) and establish a pool of trainers nationally.	2019-2020	DPM, Reproductive Health/MOH
To conduct orientation and training for the various cadre of providers for cervical cancer screening and treatment of precancer including the district and corresponding provincial hospitals.	2019-2023	DPM, Reproductive Health/MOH
To conduct a needs assessment in the facilities where cervical cancer screening and treatment of precancer services prior to setting up the services.	2019-2020	DPM, Reproductive Health/MOH
To procure and distribute all required equipment and supplies for the above services.	2019-2020	
To support supervision of the screening & treatment services jointly done by programmatic and technical personnel preferably a trainer.	2019-ongoing	DPM, Reproductive Health/ MOH
To develop and disseminate a national standard operating procedure for cervical cancer screening based on the experience from the pilot including guidelines for special situations such as the screening for HIV positive women and screening pregnant women.	2019-2020	DPM, Reproductive Health/ MOH
To initially strengthen referral centres in the provinces where screening services are set up through capacity building of providers in the screening, diagnosis and management of lesions needing LEEP or Knife Conization. Procuring necessary equipment and supplies.	2019- 2022	DPM/MOH
To introduce HPV DNA test as a primary screening test for population-based screening after piloting the HPV DNA test in selected OD exploring the possibility of self-collected samples including acceptability and feasibility studies of self-collected samples.	2022	DPM/MOH

Strategic Objective 2.3 To strengthen referral centres for diagnosis and treatment of complex cervical precancer lesions and invasive cancer.		
To set up centralized cancer treatment center with linkages for referral of woman for the management of cervical cancer. Brachytherapy unit would be an added advantage and can be used to manage other cancers as well.	2020	MOH
To build capacity for the management of invasive lesions of the cervix- diagnosis and management by radical surgery and or radiotherapy/chemotherapy.	2019-2022	MOH
To build capacity of Pathologists and labs in the national hospital/ Cancer Center	2019-2022	MOH
To establish mechanisms to support the patient and care giver to complete the appropriate treatment and care.	2019-2020	MOH
To strengthen palliative care services at various levels as detailed in the Non-Communicable diseases (NCD) strategy	2019-ongoing	DPM/MOH
Strategic Objective 3.1 To ensure Accountability and Effective Programme Management		
To establish the S-TWG as a National Multi-disciplinary management team to provide governance for cervical cancer prevention program.	2019	DPM/MOH
To develop scope of work/ terms of reference for the national multi- disciplinary management team.	2019	DPM/MOH
To develop clear targets for coverage and quality and adjust Health Information Systems (HIS), as needed, to include necessary information to evaluate programme performance	2019	DPM/MOH
Strategic Objective 3.2 To Monitor and Evaluate the cervical cancer prevention and control services		
To set up participatory methods of self-assessment of local programs and problem-solving involving input from all cadres of providers as well as representative community members.	2020-2022	DPM/PHD/OD /MOH
To set up a supportive process to identify gaps and take corrective action both on the technical aspects and program aspects.	2019-2020	DPM/MOH

To make cervical cancer reportable disease	2020-2023	DPM/MOH
To include performance indicators (refer section on monitoring and evaluation in the Cambodian Health Information System	2019-2020	DPM/MOH
To set up Hospital Based Cancer Registry (HBCR)	2021	DPM/MOH
To set up Population Based Cancer Registry (PBCR)	2022	DPM/MOH

4. Budget plan

Potential sources of funding for the implementation of this national action plan for cervical cancer prevention and control include:

Government Budget: The major operational cost for the implementation of these preventive services through the public health facilities is governance, planning, implementation and evaluation.

Pooled Donor Fund: To support the government to implement these services as government priority areas in compliance with the government guidelines.

Non-Pooled Donor Fund: Financial and technical assistance in capacity building and monitoring.

National Social Security Fund: This insurance system has the potential to include cervical cancer screening and treatment of pre-cancer as one of the services provided in the insurance package.

GAVI: Cambodia is a GAVI eligible country. The HPV vaccine demonstration project in the 2 provinces has been implemented and recommended to scale up. MOH will apply to GAVI for co-funding the expansion of HPV vaccination nationwide.

IAEA: Technical assistance and financial assistance to upgrade national hospital with needed equipment such as Brachytherapy units and Capacity building.

IARC: Technical assistance and financial assistance to set up HBCR and PBCR.

Activities	When	Estimated Cost	Possible Funding Source
Strategic Objective 1.1: Advocacy			
To identify and engage national champions (high visibility) in activities	2019- ongoing	-	-
To involve national champions to lobby for establishment of a budget line for the cervical cancer program.	2019- ongoing	-	-
To develop/adapt tools to demonstrate the cost benefit analysis and the deaths averted if the cervical cancer prevention program is implemented as a population based public health intervention. These will be shared in forums with the policy makers.	2019-2020	\$10 000	KfW
To conduct activities to involve professional and academic groups to lend their expertise and support to a population based programme for the prevention and control of cancer of the uterine cervix, particularly the building of provider capacity at various levels of healthcare system.	2019-ongoing	\$4 780	KfW
To organize and conduct High-level Consultative Meeting with international and national participants, focusing on cervical cancer prevention and control.	2019-2023	\$10000	WHO/UNFPA
To conduct advocacy activities at provincial, district, and community level and get their buy in for cervical cancer prevention activities.	2019-ongoing	\$7200	MOH
Strategic Objective 1.2: To create demand by community mobilization, providing information, education and communication			
To develop/adapt IEC materials in local language for HPV vaccination and screening and treatment of precancerous lesions of the cervix linking the two interventions- job aids	2019-2020	\$23,000	GAVI

such as flip charts, screening and vaccination cards, pamphlets, flyers... etc.			
To train providers in the use of these IEC material.	2019- 2021	\$15,500	GAVI
To develop and implement communication and mobilization action plan to schedule timing for these IEC activities prior to the delivery of these services.	2019- 2021	-	-
To set up periodic evaluation utilizing KAP study to evaluate IEC activities.	2019- 2021	\$40,000	GAVI
Strategic Objective 2.1 Primary Prevention: HPV Vaccination & Condom Promotion			
To develop/update training materials and curriculum to support the scaling up the HPV vaccination.	2019	\$25,000	GAVI
To develop selection criteria and time frame for expansion nationwide.	2019		
To make full application to GAVI for co-funding of nationwide HPV vaccination.	2019	-	-
To conduct regular ongoing supportive supervision of the services with periodic evaluations using the indicators as detailed in the section on monitoring.	2019-2023	\$16,500	GAVI
To promote condom use as a method to reduce HPV transmission.	2019 – ongoing	-	-
To scale up HPV vaccination services nationwide based on the evidence gathered from the two demonstration projects plan aiming for over 90% coverage.	2019 – ongoing	\$0	
To conduct needs assessment, procuring and distributing supplies, launching and providing services in the provinces where HPV vaccination are to be implemented.	2019-2020	\$40,000	GAVI
To explore strategies for long-term financing for HPV vaccine program (e.g. dedicated percentage of tobacco or alcohol tax).	2019	\$0	

To include key HPV vaccination indicators in Cambodia health information system to enable evaluating program performance.	2019	\$0	
Strategic Objective 2.2: To prevent cervical cancer by providing screening and treatment of cervical precancer services planning for incremental coverage			
To review/update, disseminate a national guideline for the cervical cancer prevention based on the experience from the pilot including guidelines for special situations such as the screening for HIV positive women and screening pregnant women.	2019	\$12 560	KfW/HEQIP
To develop selection criteria for expansion and the time frame for expansion.	2019	\$200	Government
To scale up population-based screening and treatment of cervical precancer nationwide (selecting provinces where HPV Vaccination will also be implemented and planning for incremental coverage in 5 years).	2018-2022	\$40000	KfW/HEQIP
To revise training materials and conduct TOT for pooled national trainers	2019	\$35000	KfW/HEQIP
To conduct orientation and training for the various cadre of providers for cervical cancer screening and treatment of precancer including the district and corresponding provincial hospitals.	2019- 2023	\$150000	KfW/HEQIP
To conduct a needs assessment in the facilities where cervical cancer screening and treatment of precancer services prior to setting up the services.	2019-2023	\$30000	KfW/HEQIP
To procure and distribute all required equipment and supplies for the above services.	2019-2023	\$700000	KfW/HEQIP
To support supervision of the screening & treatment services jointly done by programmatic and technical personnel preferably a trainer	2019-ongoing	\$12 544	KfW/HEQIP

To develop and disseminate a national standard operating procedure for cervical cancer screening based on the experience from the pilot including guidelines for special situations such as the screening for HIV positive women and screening pregnant women.	2019-2020	\$12 009	UNFPA
To initially strengthen referral centres in the provinces where screening services are being set up through capacity building of providers in the diagnosis and management of lesions needing LEEP or Knife Conization. Procuring necessary equipment and supplies.	2019- 2022		PMD/MOH
To introduce HPV DNA test as a primary screening test for population-based screening after piloting the HPV DNA test in selected OD exploring the possibility of self-collected samples including acceptability and feasibility studies of self-collected samples.	2022	-	PMD/MOH
Strategic Objective 2.3: To strengthen referral centres for diagnosis and treatment of complex cervical precancer lesions and invasive cancer.			
To set up centralized cancer treatment center with linkages set up for referral of woman for the management of cervical cancer. Brachytherapy unit would be an added advantage and can be used to manage other cancers as well.	2021	\$500 000	Government
To build capacity for the management of invasive lesions of the cervix- diagnosis and management by radical surgery and or radiotherapy /chemotherapy.	2019-2022	\$27,000,000	Government
To build capacity of pathologists and labs in the national hospital/ Cancer Center	2019-2023	\$2,000,000	Government
To establish mechanisms to support the patient and care giver to complete the appropriate treatment and care.	2019-2020	-	MOH

To strengthen palliative care services at various levels as detailed in the national strategic plan for the prevention and control of non-communicable diseases	2019- ongoing	\$65,365	KfW
Strategic Objective 3.1: To ensure Accountability and Effective Programme Management			
To organize regular sub-technical working group meeting to provide governance for cervical cancer prevention program	2019-ongoing	\$5,000	MOH
To develop scope of work/terms of reference for the Sub-TWG for Cervical Cancer.	2019	\$300	MOH
To develop clear targets for coverage and quality and adjust Health Information Systems (HIS), as needed, to include necessary information to evaluate programme performance	2019	\$200	MOH
Strategic Objective 3.2: To Monitor and Evaluate the cervical cancer prevention and control services			
To set up participatory methods of self-assessment of local programs and problem-solving involving input from all cadres of providers as well as representative community members.	2020-2022	\$ 104,507	KfW
To set up a supportive process to identify gaps and take corrective action both on the technical aspects and program aspects.	2019-2020	\$ 36,256	KfW
To make cervical cancer reportable disease	2019-2023		MPD/CDC/ MOH
To include performance indicators for cervical cancer in the Cambodian Health Information System	2019-2020	-	-
To set up Hospital Based Cancer Registry/s (HBCR)	2021	-	-
To set up Population Based Cancer Registry (PBCR)	2022	-	-

5. Monitoring and Evaluation

	Indicator	Method of calculation
1	Percentage of eligible girls in the target population who have received the two recommended doses (fully vaccinated in the HPV vaccination schedule).	<ul style="list-style-type: none"> ▪ Numerator: <i>Number of eligible girls receiving 2 doses of HPV vaccination.</i> ▪ Denominator: <i>Number of girls in the population eligible for HPV vaccination (school and non-school girls)</i> ▪ Method of measurement: <i>Number of eligible girls receiving 2 doses of HPV vaccination/ (total number of girls in the population eligible for HPV vaccination) x 100</i> ▪ Measurement frequency: <i>Semester, Annually.</i> ▪ M&E framework: <i>Outcome</i> ▪ Data sources: <i>Registration book, national census data.</i>
2	Percentage of women in the target population aged 30-49 years who have been screened at least once	<ul style="list-style-type: none"> ▪ Numerator: <i>Number of women aged between 30-49 years screened for cervical precancerous lesion in health facilities (cumulative).</i> ▪ Denominator: <i>Number of women in the population who are 30-49 years of age.</i> ▪ Method of measurement: <i>Number of target women aged 30- 49 years screened for cervical pre-cancerous lesion / (total number of women in the population who are 30-49 years of age) x 100.</i> ▪ Measurement frequency: <i>Annually</i> ▪ M&E framework: <i>Outcome</i> ▪ Data sources: <i>HIS, Facility registration book, national census data.</i>
3	Percentage of women 30-49 years who have been screened for the first time with a cervical screening test in the 12-month period.	<ul style="list-style-type: none"> ▪ Numerator: <i>Number of women aged between 30-49 years screened for cervical precancerous lesion for the first time in the 12- month period in health facilities (cumulative).</i> ▪ Denominator: <i>Number of women in the population who are 30-49 years of age.</i> ▪ Method of measurement: <i>Number of women aged between 30-49 years screened for cervical precancerous lesion for the first time in the 12-month period in health facilities / (total number of women in the population who are 30-49 years of age) x 100</i> ▪ Measurement frequency: <i>Annually</i> ▪ M&E framework: <i>Output</i>

		<ul style="list-style-type: none"> ▪ Data sources: <i>Health facility registration, HIS, national census data.</i>
4	Percentage of screened women aged 30-49 years with a positive result in the previous 12-month period.	<ul style="list-style-type: none"> • Numerator: <i>Number of screened women aged 30-49 years with a positive result in the previous 12-month period.</i> • Denominator: <i>Number of women in the population who are 30-49 years of age.</i> • Method of measurement: <i>Number of screened women aged 30-49 years with a positive result in the previous 12-month period / (total number of women in the population who are 30-49 years of age) x 100</i> • Measurement frequency: <i>Annually</i> • M&E framework: <i>Output</i> • Data sources: <i>Health facility registration, HIS, national census data</i>
5	Percentage of screen-positive women completing appropriate treatment for cervical precancerous lesion in the previous 12-month period	<ul style="list-style-type: none"> • Numerator: <i>Number of screen-positive women completing appropriate treatment for cervical precancerous lesion in the previous 12-month period.</i> • Denominator: <i>Number of screened women aged 30-49 years with a positive result in the previous 12-month period.</i> • Method of measurement: <i>Number of screen-positive women completing appropriate treatment for cervical precancerous lesion in the previous 12-month period/ (total number of screened women aged 30-49 years with a positive result in the previous 12-month period) x 100</i> • Measurement frequency: <i>Annually</i> • M&E framework: <i>Outcome</i> • Data sources: <i>Hospital registration</i>

6. Conclusion

A comprehensive approach to cervical cancer prevention and control in Cambodia is to act across the life course using the natural history of the disease to identify opportunities in relevant age groups to deliver effective interventions.

This ranges from community education and social mobilization, HPV vaccination, screening for pre-cancerous lesion and timely treatment to palliative care. It is therefore to get involved from other disciplines and national health programmes and national such as immunization, reproductive health and adolescent health.

While HPV vaccine is introduced in the country, cervical cancer screening programme will need to be developed or strengthened. The program must have universal coverage of the targeted population and financing for long-term sustainability in order to have an impact on cervical cancer mortality.