Government of Pakistan
Ministry of National Health Services,
Regulations & Coordination

Non-Communicable Diseases & Mental Health

NATIONAL ACTION FRAMEWORK 2021-30

Enhancing the Inter-Sectoral Response to Disease Prevention and Control

Non-Communicable Diseases & Mental Health

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November 2021

Provincial/ Federating Area Health Departments

and

Ministry of National Health Services, Regulations & Coordination

@ 11th of November 2021

Non-Communicable Diseases & Mental Health
National Action Framework 2021-30

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MESSAGE FROM THE PRESIDENT OF PAKISTAN

H.E. Mr Arif Alvi

On the threshold of being classified as a lower-middle income country, people in Pakistan are adopting a more sedentary lifestyle with less physical activities and exercise. They are also more prone to mental health disorders and stress. Food consumption patterns have changed, and people are consuming more processed foods instead of fresh fruits, meat and vegetables. In addition, Pakistani's have a very high intake of sugar and salt. These variable risk factors have resulted in rising non-communicable diseases, leading to further worsening of mental health conditions and vice versa.

The vicious cycle must break. I am confident that the country will certainly benefit from this national action plan, which proposes a strategic direction for healthy individuals, families and communities, through an inter-sectoral approach to tackle non-communicable diseases and mental health disorders.

I take this opportunity to wish the Ministry of National Health Services, Regulations & Coordination, Provincial / Area Health Departments and other stakeholders all the very best in their quest for Universal Health Coverage and understanding the reform agenda of non-communicable diseases and mental health.

JOINT MESSAGE FROM THE HEALTH MINISTERS

2030 Agenda for Sustainable Development recognizes NCD & mental health conditions as a major challenge for sustainable development. As part of the National Health Vision and Universal Health Coverage (UHC) approach, we, the federal, provincial and area Health Ministers commit to develop and implement ambitious inter-sectoral response, to prevent and control NCD and mental health conditions as an integral part of UHC benefit package of Pakistan.

Bi-directional associations exist for NCD and Mental health conditions. These conditions likely share a common diathesis whereby the vulnerability factors for one disorder can contribute to the onset of other conditions. Their mutually reinforcing nature may lead to a progressive cycle of psychological and physical ill health across the life course.

To lessen the impact of NCD and mental health conditions on individuals and society, a comprehensive approach is needed requiring all sectors, to collaborate to reduce the risks associated with NCD and mental health conditions while promoting interventions to prevent and control them.

Low-cost and high impact solutions exist. NCD and mental health interventions can be delivered through a primary health care approach to strengthen early detection and timely treatment. Monitoring progress and trends of NCD and mental health conditions and their risk is important for an appropriate response.

We are especially thankful to Dr Ala Alwan from the DCP3 secretariat, Dr Mahipala Palitha, Head of WHO Office, Pakistan and Dr Slim Salama, Regional Advisor NCD, EMRO for their technical support and advice. The momentum and resolve are with us to make things better. Let us not squander this opportunity.

DECLARATION BY THE FEDERAL, PROVINCIAL & AREA HEALTH MINISTERS

The National Action Framework for prevention and control of non-communicable diseases and mental health disorders is a unified and common intend with agreed key strategic priorities and actions. We commit to work with other sectors for better control and prevention of non-communicable diseases and mental health disorders. We also pledge to work together for better health of our people and communities and therefore endorse this document.

Dr Faisal Sultan
SAPM/ Federal Health Minister

Dr Yasmeen Rashid
Health Minister, Punjab

Dr Azra Pechuho
Health Minister, Sindh

Mr Taimoor Khan Jhagra
Health Minister, Khyber Pakhtunkhwa

Mr Ehsan Shah
Health Minister, Balochistan

Haji Gul Bar Khan
Health Minister, Gilgit Baltistan

Mr Nisar Ansar Abdali
Health Minister, Azad Jammu & Kashmir

ACKNOWLEDGEMENT

Mr Aamir Ashraf Khawaja
Secretary (NHSR&C)

The National Action Framework (NAF) for Non-Communicable Diseases and Mental Health (2021-2030) brings forward an important chapter of health reform. The NAF is unique in that it builds on the global best practices recommended by WHO and more specifically Disease Control Priorities 3 recommended interventions, which have already been adopted as the Universal Health Coverage (UHC) – Benefit Package of Pakistan. This framework presents actions that have been deemed essential in the implementation of prioritized interventions for improving NCD &MH outcomes.

The NAF has been developed at the most opportune time after a gap of 17 years from the previous version which came out in 2004. It was imperative that the country came up with a robust and relevant set of actions that are more in tune with the current challenges and help achieve UHC aligned non-communicable diseases and mental health goals and targets.

The Disease Control Priorities 3 (DCP3) Translation project hosted at the London School of Hygiene and Tropical Medicine (LSHTM) and supported by the Bill & Melinda Gates Foundation (B&MGF) has extended collaboration in support of the development of NAF. Technical support from British High Commission through Oxford Policy Management is also acknowledged. I deeply appreciate the continued support of Professor Ala Alwan, Principal Investigator and his colleagues at the DCP3 Secretariat. I am also personally thankful to Dr Mahipala Palitha, Head of WHO Office in Pakistan, Dr Slim Salama, Regional Advisor NCD, EMRO and Dr Khalid Saeed, Regional Advisor Mental health, EMRO for their continued strategic support and advice.

Dr Rana Muhammad Safdar
Director General (Health)

Cooperation of all provincial/ area health and other ministries /departments and especially role of Secretaries and Director General Health Services is acknowledged for their inputs and contributions.

The development of the NAF (2021-30) has been spearheaded by Dr Samra Mazhar, Deputy Director Programs, from the Ministry's side. She has been instrumental in coordinating this complex task with all the experts and stakeholders involved and deserves the utmost praise. I am thankful to the NCD focal points from all Provincial/ Area Health Departments, line ministries/ departments, development partners, civil society organizations, non-governmental organizations, academia and all those who participated in the series of meetings and consultations held to develop the framework for their valuable contributions. Support for the development of NAF was provided by the team at the Health Planning, System Strengthening and Information Analysis Unit (HPSIU) led by Dr Malik Muhammad Safi, Dr Raza Zaidi, Dr Hasan Bin Hamza and Dr Saira Kanwal.

Finalization of NAF (2021-30) completes a critical policy requirement of the health sector reform process undertaken by the government and partners. It is envisaged that along with the recently finalized National and Provincial EPHS/ UHC - benefit packages, this framework will be put to use by respective Health and other Departments for extracting maximum advantage from the available resources for improving the health of the people.

EXECUTIVE SUMMARY

The health landscape in Pakistan has undergone significant changes in the last two decades. These changes have occurred at legislative, health system, health policy besides the epidemiological transition of disease burden. Legislative actions via the eighteenth constitutional amendment have devolved health functions from Federal to Provincial level, while various vertical programmes have been horizontally integrated into the provincial health departments. The government has undertaken the most significant and far-reaching health sector reforms by finalizing the Essential Package of Health Services (EPHS)/ Universal Health Coverage (UHC) -Benefit Package to address the health needs of the populations based on localized evidence which shows that the country is transitioning to a greater burden of Non-communicable diseases (NCDs) & injuries and that the burden of reproductive, maternal, new-born & child health and communicable disease is on a downward trajectory.

Given the increasing burden of NCDs in Pakistan, a robust policy response is required to address the NCD challenge in the country through a multi-sectoral approach. Since the previous NCD National Action Framework (NAF) was published in 2004, the Ministry of National Health Services, Regulations and Coordination (Mo NHSR&C) undertook the responsibility of providing the much-needed policy direction with respect to NCDs in the shape of NAF for NCDs and Mental Health (MH) (2021-2030) for Pakistan. The addition of mental health to the NAF for NCDs ensures that the gap with respect to lack of a coherent policy direction on mental health is also finally addressed.

The development of the NAF for NCDs & MH followed a comprehensive review of evidence and consultative process. The work commenced in 2017 with the WHO NCD Mission's visit to Pakistan and was followed by notification of the 1) NCDs & MH Task Force and 2) NCDs & MH Technical Working Group. Input from provincial/ area representatives, development partners, civil society organizations and academics besides members of the TWG was obtained to finalize the NAF for NCDs and MH.

The NCD & MH NAF in underpinned by the following goal: 'Reduce by one-third pre-mature mortality from non-communicable diseases (NCD) by 2030, through prevention and treatment, and promote mental health and well-being'.

The recently finalized and approved generic EPHS / UHC Benefit Package informs the NCD & MH Action Framework. The generic and provincial/ area EPHS are organized into four clusters for priority services:

- Reproductive, maternal, new-born, child, adolescent health & nutrition/ Life course related
- Infectious diseases
- Non-communicable diseases & Injury prevention
- Health services

The NCD & MH Action Framework identifies five core strategic areas for interventions related to prevention and control of NCDs and mental health disorders:

1) Governance
2) Prevention and Reduction of Risk Factors

3) NCD Healthcare
4) Mental Health Services and
5) Surveillance M&E and Research.

Each strategic area lists key challenges and priority strategic actions that are aligned with global and national health priorities.

A robust framework of twenty-five indicators is suggested under the NAF. The indicators are designed to monitor and report progress for the following main areas:

- Mortality & morbidity
- Behavioural risk factors
- Biological risk factors
- National systems response

The Government of Pakistan has finalized a generic costed Essential Package of Health Services / UHC benefit package that is to be implemented across five levels of health service delivery, i.e., 1) Community, 2) Primary Health Care (PHC) center, 3) First level hospital, 4) Tertiary hospital and 5) Population levels. In this respect Provincial/ Area level localization has also been completed based on local situation, milestones and priorities. Costed NCD and mental health interventions are included in the generic as well as all provincial/ area EPHS.

Inter-sectoral policies have also been prioritized through a consultative process with line ministries, departments and stakeholders.

CONTENTS

ACRONYMS

AKU	Aga Khan University
BHU	Basic Health Unit
BoD	Burden of Disease
COPD	Chronic obstructive pulmonary diseases
CVD	Cardiovascular Disease
CKD	Chronic Kidney Disease
CRVS	Civil Registration & Vital Statistics
DALY	Disability Adjusted Life Years
DCP3	Disease Control Priorities – 3rd Edition
EPHS	Essential Package of Health Services
FCTC	Framework Convention on Tobacco Control
FLH	First level hospital
GATS	Global Adult Tobacco Survey
GB	Gilgit Baltistan
GBD	Global Burden of Disease
GDP	Gross Domestic Product
GYTS	Global Youth Tobacco Survey
HDI	Human Development Index
HPSIU	Health Planning, System Strengthening & Information Analysis Unit
HR	Human Resource
HPV	Human Papilloma Virus
ICT	Islamabad Capital Territory
IHD	Ischemic Heart Disease
KP	Khyber Pakhtunkhwa
LHW	Lady Health Worker
LMIC	Low middle-income countries
MH	Mental health
mhGAP	Mental Health Global Action Program
MoH	Ministry of Health
M/o NHSR&C	Ministry of National Health Services, Regulations & Coordination
NAF	National Action Framework
NCD	Non-Communicable Diseases
PEN	Package of Essential Non-Communicable (PEN)
PHC	Primary Health Care
RMNCH	Reproductive, Maternal, New-born & Child Health
RHC	Rural Health Centre
SDG	Sustainable Development Goal
STEPS	STEPwise Approach to NCD Risk Factor Surveillance
UHC	Universal Health Coverage
UHC-BP	Universal Health Coverage- Benefit Package
YLD	Years Lived with Disability
YLL	Years of Life Lost
WHO	World Health Organization

INTRODUCTION

The rising burden of non-communicable diseases (NCD) and mental health conditions constitute a major public health challenge in Pakistan, that has a serious negative impact on social and economic development, and inter alia is a serious threat to progress related to sustainable development goals (SDGs) and universal health coverage (UHC).

At the start of this millennium, Pakistan was among the few countries in the world, delineating the National Action Plan for prevention and control of NCD[1] but overlooked true implementation and delivering results. The consequence is that compared to significant positive trends in reproductive, maternal, new-born & child health (RMNCH) and communicable diseases, the burden of non-communicable diseases while stagnant in absolute terms is rapidly increasing its relative share of the total burden of disease.

Pakistan is currently at the crossroads of classical epidemiological transition and faces a double burden of disease. This particular shift in disease-related paradigm has important implications for the health sector, health care service delivery capacities and corresponding resource allocation in the country.

For the first time, the burden of NCD and Injuries, in terms of Disability Adjusted Life Years (DALYs), is reported to be around 50.1% of the total burden of disease in 2019, surpassing burden of RMNCH and communicable diseases (49.9%). The transition towards NCD and Injuries is more prominent in Punjab (53.2%), Azad Jammu & Kashmir (64.7%) and Islamabad (68.7%).[2]

At the regional level, share of NCD (including mental health disorders) related burden (DALYs) and deaths in Pakistan is still comparatively less than Iran, Sri-Lanka, Bangladesh and India, as the country is in the middle of the epidemiological transition. However, this also highlights the expected rapid rise in the burden of NCD and mental health conditions and deaths in coming years.

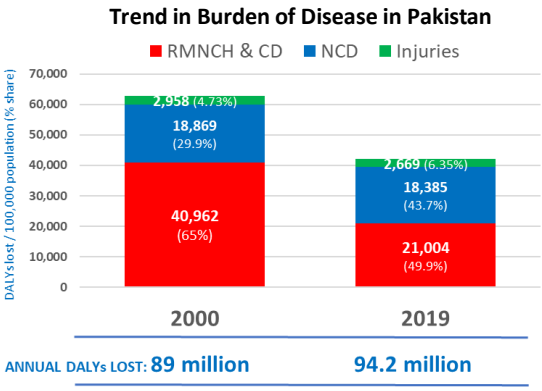
Strong health and multisectoral leadership, partnership and urgent actions are required at the national, provincial, area and population levels to mitigate inequality and risk factors within populations.

[1] Ministry of Health, WHO and Heartfile, 2004; National Action Plan for prevention and control of non-communicable diseases and Health promotion in Pakistan

[2] Institute for Health Metrics and Evaluation (IHME), Seattle, United States, 2021; Global Burden of Disease data for Pakistan (GBD 2019). Results from https://collab2019.healthdata.org/gbd-compare

OVERVIEW OF THE NCD SITUATION

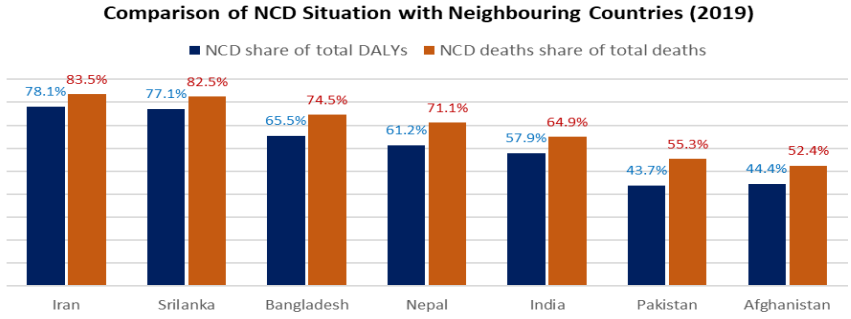
In Pakistan, the non-communicable diseases (NCD) including mental health are becoming a major equitable and socio-development challenge for Pakistan, with variation at provincial/ area level. Burden of the non-communicable disease group which was 29.9% (18,869 DALYs lost per 100,000 population) of the total burden in the year 2000 has increased its share to 43.7% (18,385 DALYs lost per 100,000 population) in 2019. The share of burden of injuries increased from 4.73% (2,958 DALYs lost per 100,000 population) to 6.35% (2,669 DALYs lost per 100,000 population) over the same period.[2]



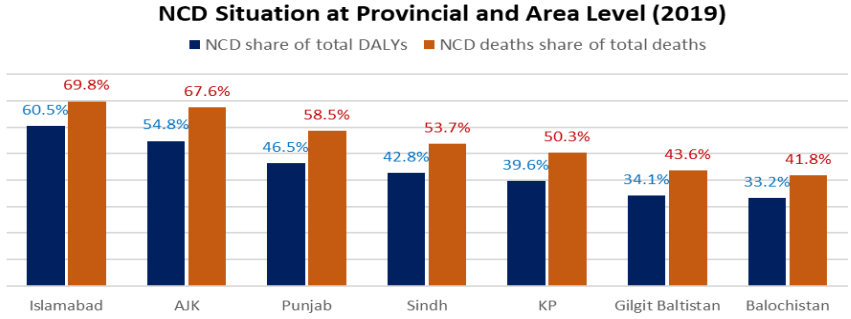
Mortality data demonstrate a similar pattern and the total NCD related deaths were estimated to be 55.3% of all 1.49 million deaths in the country in 2019. The cross over to higher mortality due to NCD in Pakistan occurred around 2009, which is already ten years back. However, a comparison of neighbouring countries of Pakistan for NCD share of total DALYs and total deaths indicates a delayed epidemiological transition in Pakistan. This also means that the country is still struggling to tackle RMNCH & infectious diseases, whereas NCD will continue to rise rapidly in the coming years.

Share in total deaths in 2019

- RMNCH & Infectious Disease – 38.9%
- Non-Communicable Disease – 55.3%
- Injuries- 5.7%

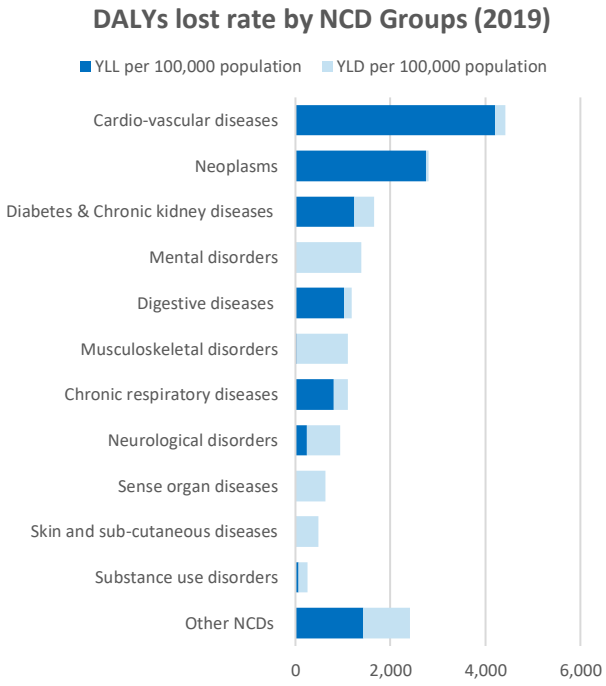


The same comparison at provincial and area level in Pakistan indicate serious equitable challenges and delayed epidemiological transition especially in Sindh, Khyber Pakhtunkhwa, Gilgit Baltistan and Balochistan.



NON-COMMUNICABLE DISEASE GROUPS

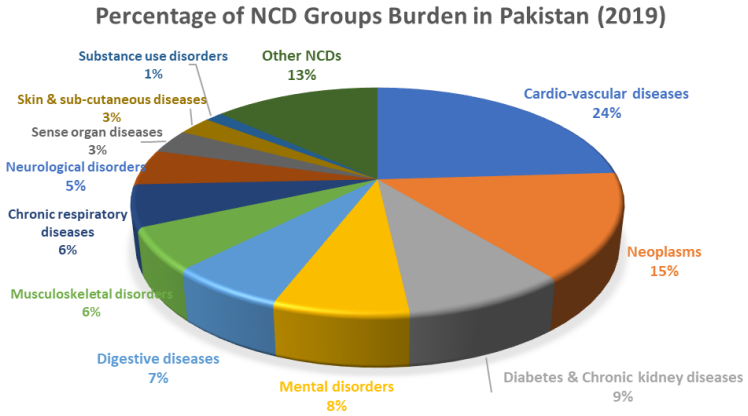
Non-communicable diseases are classified into twelve disease groups with DALYs rate for each group in Pakistan in 2019 as shown in the graph. Overall, Years of life lost (YLL) per 100,000 population were 11,777 whereas Years lived with disability (YLD) were 6,608.[2]



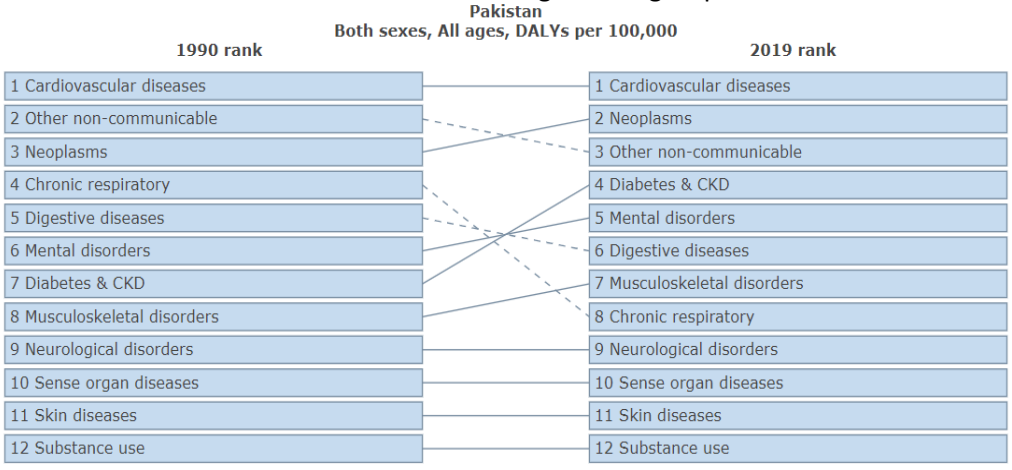
NCD related DALYs rate in Pakistan are primarily driven by five main disease groups:

1) Cardio vascular diseases (CVDs)
2) Neoplasms/ Cancers
3) Diabetes & Chronic kidney diseases
4) Mental disorders, and
5) Chronic respiratory diseases

YLL rate for mental disorders is negligible, as cause of death is indirect and usually counted under Injuries including self-harm. YLL rate for Injuries was 2,112 per 100,000 in 2019.

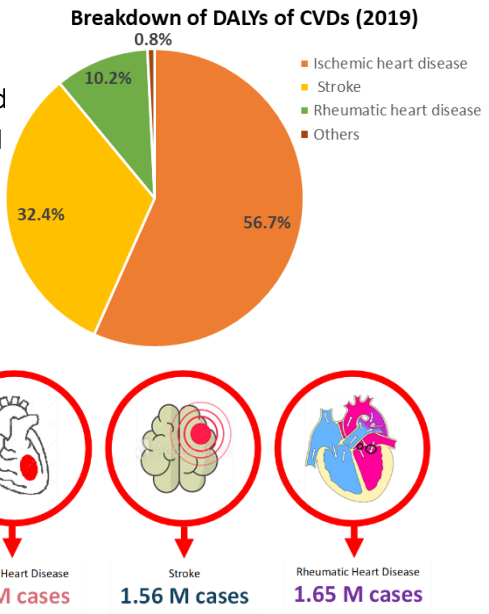


Since 1990, there are variations in the burden of different NCD disease groups. While CVDs are still on the top, there is worsening ranking for Neoplasms/ cancers, Diabetes & Chronic Kidney Disease (CKD), Mental disorders and Musculoskeletal disorders. Current ranking of NCD groups is shown below:



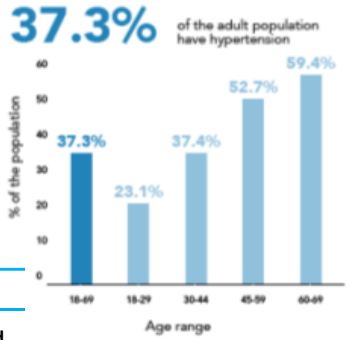
A. Cardio-vascular diseases

The magnitude of increase, in NCD related death and disability from 2009 to 2019, is alarming. The Global Burden of Disease (GBD) data for Pakistan reports that ischemic heart disease (IHD) related death and disability increased by 29% between 2009 and 2019.[3] Stroke related death and disability increased by 20%, while diabetes related death and disability increased by 87% in the same time period. These numbers indicate that the burden on the future health service delivery in Pakistan is going to be exceptionally challenging as not only the diseases are leading to an overwhelming loss of DALYs on the one hand, while on the other economic losses are also substantial, first due to the loss of economic activity and second due to the phenomenal cost associated with treating these lifelong conditions. In Pakistan, 55% of NCD mortality is due to CVDs, which is expected to rapidly rise in coming years. DALYs lost attributable to CVDs include IHD, stroke, rheumatic heart disease, cardiomyopathy & myocarditis, peripheral artery disease and other cardio vascular disorders.



46 M cases

Hypertension is one of the world's silent killers, with more than 1.1 billion people living with hypertension. According to the WHO Hypertension fact sheet for Pakistan, 37.3% of the adult population and around 20.2% of the total population have hypertension. Around 11.6% of the total population are aware of (diagnosed) hypertension; 4.5% of the total population are under treatment and only 1.4% of the total population have controlled this.

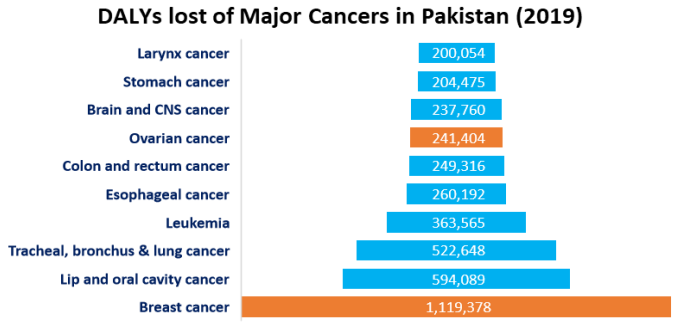


NATIONAL SYSTEMS RESPONSE (2019)

Availability of a policy to reduce population salt/ sodium consumption	Number of essential hypertension-related medicines reported as "generally available"	Blood pressure measurement reported as "generally available" in primary health care facilities of the public sector
✗	● ○ ○ ○ ○	✓

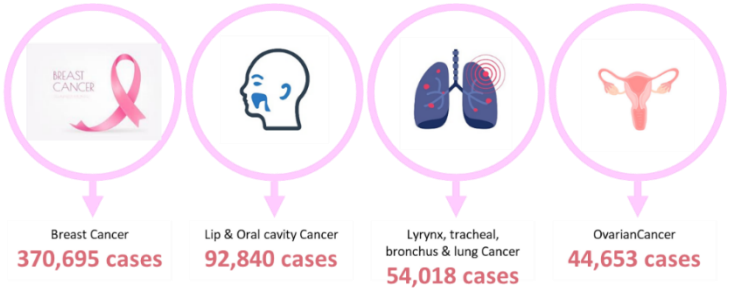
B. Cancers

Cancers (Neoplasms) are the second leading group of morbidity and mortality among NCD in Pakistan. GBD 2019 estimated that there were more than 4.1 million cancer cases in Pakistan, whereas new cases were more than 2.77 million. Around 179,773 cancer related patients' deaths were estimated in the same year.



[3] Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: A systematic analysis for the Global Burden of Disease Study 2019. Global Health Metrics| Volume 396, Issue 10258, P1204-1222, October 17, 2020

Cancers accounted for 6.7% of the total DALYs lost and 12% of total deaths in Pakistan in 2019. GBD 2019 estimated prevalence of cancers in Pakistan was 1,834/100,000 population, while incidence rate was 1,236/ 100,000 population.



The most prevalent and frequently diagnosed cause of cancer death in female population of Pakistan was breast cancer, having an estimated rate of prevalence of 165/ 100,000 population. Annual approximately fifty-one thousand newly diagnosed cases of breast cancer are reported.

Cancers like breast, lung, liver, colorectal, prostate, head and neck carcinoma are most commonly diagnosed in Pakistan. Hepatocellular cancer is a common tumour in Pakistan, linked to the high background prevalence of hepatitis C and B. Cancer may be caused by different factors like gene mutations, carcinogens and some medical factors that harm the immune system of the body.

Symptoms of cancer are relatively varied and classified according to location, progression pattern and size of tumours as well. Cancer management and chemo protocols also depend on the progression and site where it develops. Tumours that reside only in a specified location and show restricted growth are commonly characterized as benign tumours. In 2019, more than 3.37 million out of total of 4.1 million cancer cases were estimated as benign in Pakistan.

Oncology hospitals by province (public & private)

- Punjab: 7
- Sindh: 11
- KP: 7
- Balochistan: 1
- Islamabad: 3
- GB: 1

Radio-therapy services by province (public & private)

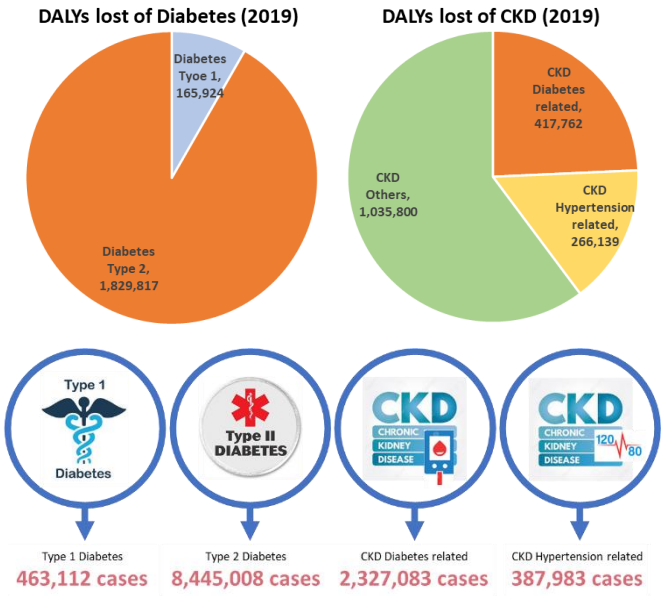
- Punjab: 9
- Sindh: 9
- KP: 1
- Balochistan: 1
- Islamabad: 4

Pakistan Atomic Energy Commission (PAEC) gives high priority to the application of nuclear technology in health sector. Through its 18 medical centres spread all over the country, patients receive state-of-the-art diagnostic and treatment facilities either free of charge or at subsidized rates.

Small- and large-scale private sector hospitals are also offering chemotherapy services. Whereas Lady health workers (LHWs) and PHC centres are engaged for early screening of cancers, especially breast cancer.

C. Diabetes and Chronic kidney diseases

Another 'Silent Killer' in the NCD group is Diabetes - a major public health issue in Pakistan. Diabetes has a significant lifelong catastrophic health expenditure on person, family and society. Further, complications of diabetes include stroke, cardiovascular diseases, chronic kidney disease (CKD)/ renal failure, cataract and others.



GBD 2019 estimated that there were more than 19 million diabetes and chronic kidney disease cases in Pakistan, whereas new cases were more than 795,706. Prevalence rate of diabetes was 3,975 per 100,000 population whereas prevalence of CKD was 5,585 per 100,000 population. Around 92,000 diabetes and chronic kidney disease related patients' deaths were estimated in the same year.

According to a systematic review[4] on Type 2 diabetes in Pakistan, in males the prevalence is 11.20% and in females 9.19%. The mean prevalence in Sindh province is 16.2% in males and 11.70 % in females; in Punjab province it is 12.14% in males and 9.83% in females. In Balochistan province 13.3% among males, 8.9% in females; while in Khyber Pakhtunkhwa (KP) it is 9.2% in males and 11.60% in females. The prevalence of type 2 diabetes mellitus in urban areas is 14.81% and 10.34% in rural areas of Pakistan.

Another systematic review[5] in 2019 which identified a total of 635 studies, only 14 studies were considered for meta-analysis. The prevalence of diabetes in Pakistan was revealed at 14.62% (10.651 – 19.094%) based on 49,418 people using the inverse–variance random–effects model. The prevalence of prediabetes was 11.43% (8.26%–15.03%) based on a total sample of 26,999 people.

While it is important to ensure availability of diagnostic and treatment services in all PHC centres, diabetes can be prevented, as many studies have shown. It can be done through lifestyle changes such as healthier diets and increased physical activities. Weight management and physical activity are the true foundation of diabetes prevention. Public awareness of the risk factors is an important step toward diabetes prevention.

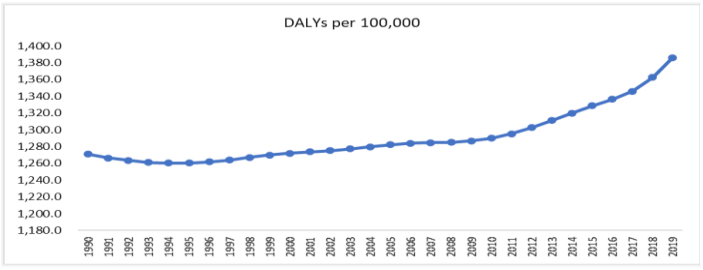
With rampant lack of awareness in Pakistan, there is under detection of earlier stages of CKD, leading to lack of preventive measures, which inevitably facilitates progression of mild, potentially treatable CKD to full-blown kidney failure. Where the annual cost of dialysis of a single patient is over $3000, annual per capita income is $1560, and public spending on health is a meagre 1% of the gross national product, it is not surprising that only, 10% receive any renal replacement therapy. *Sehat Sahulat* Programme is currently supporting the poorest families to reduce catastrophic indoor expenditure.

4 Sultan Ayoub Meo, Inam Zia, Ishfaq A Bukhari, Shoukat Ali Arain, 2016; Type 2 diabetes mellitus in Pakistan: Current prevalence and future forecast
5 Sohail Akhtar, Jamal Abdul Nasir, Tahir Abbas and Aqsa Sarwar, 2019; Diabetes in Pakistan: A systematic review and meta-analysis

D. Mental disorders

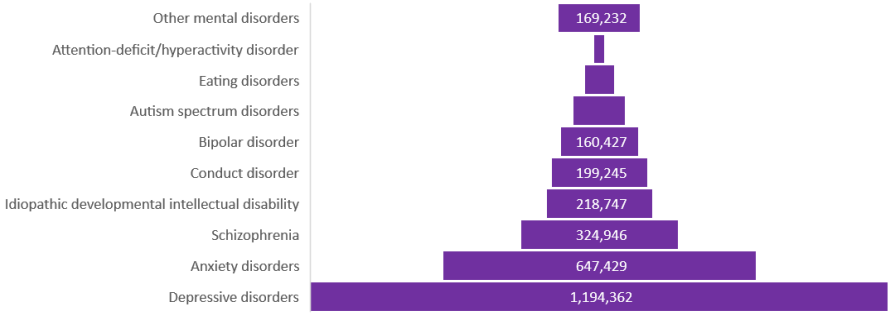
Historically, mental health has been a neglected area in Pakistan, where loss of DALYs due to mental health disorders is also on the rise. Between 1999 and 2009 the country recorded only a 1% increase in the loss of mental health disorder related DALYs while between 2009 and 2019 the increase was 8% as shown in the figure.

Trend of Burden of Mental Health Disorders in Pakistan



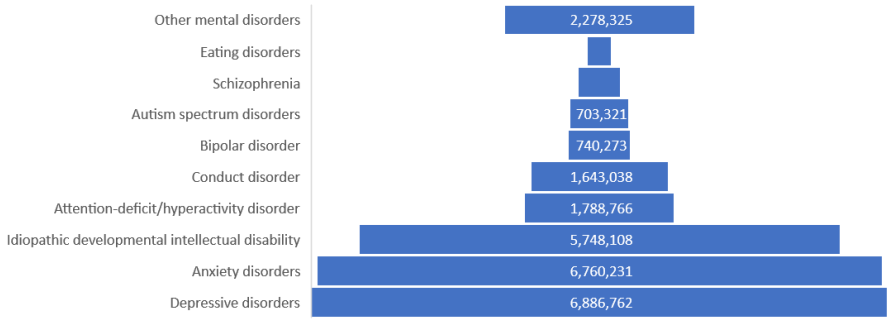
Mental disorders include a wide range of conditions. GBD 2019 data for Pakistan indicate DALYs loss as a result of mental disorders of around 3.1 million, with three major conditions including depressive disorders, anxiety disorders and schizophrenia.

DALYs lost from Mental Disorders (2019)



On the other hand, prevalent cases of mental disorders were around 25.7 million, with three major conditions including depressive disorders, anxiety disorders and idiopathic developmental/ intellectual disabilities.

Prevalent Cases of Mental Disorders (2019)



Neurological disorders and substance abuse disorders are not included in the Mental disorders group but are closely associated. Total DALYs lost in 2019 as a result of neurological disorders was around 2.1 million, whereas that of substance abuse disorder was 0.57 million. Prevalent cases of neurological disorders were around 72.5 million, whereas those of substance abuse disorders were 3.4 million in 2019.

Mental disorders are usually not considered a direct cause of death and most of the deaths are categorized under injuries including self-harm etc. More than 85,000 deaths were estimated as a result of injuries in 2019, out of which one third were as a result of self-harm.

While it is socially acceptable to seek help from a health professional for physical disorders, seeking help for psychological disorders is problematic in Pakistan. Mental illness is often associated with supernatural forces such as witchcraft, possession, and black magic. Families often hide mental illness to prevent the patient from adverse stereotyping.

The psychological health care system is deficient in Pakistan, and the way it is mainly managed explains why accessing psychological help is a taboo subject. At the time of independence in 1947, there were three mental asylum-like hospitals, one each at Hyderabad, Lahore, and Peshawar, with a total of 2000 beds. These were in a miserable shape with no psychiatrists and managed by medical officers only. These hospitals were called mad-houses or "*pagal khanay*" and patients were often brought there in chains.

Seven decades after independence, the health care system is still not adequate. Whereas the median number of mental health beds per 100,000 population is above 50 in high-income countries, and 11.3 in the more developed countries of the Eastern Mediterranean Region, this figure is around 1.7 for Pakistan. A recent survey showed that nearly a third of the respondents believed that people fail to access mental health services because mental health professionals are not accessible.

Given the limited fiscal space available for mental health, it should at least sensitize the people that mental disorders are just like physical disorders.

E. Chronic respiratory diseases

In this NCD group, major diseases include chronic obstructive pulmonary disease (COPD), pneumoconiosis, asthma, interstitial lung disease and pulmonary sarcoidosis and other chronic respiratory diseases. COPD and asthma form the major burden in this group with annual DALYs loss of 1.7 million and 0.56 million respectively in 2019. Number of cases of the two diseases were 3 million and 3.2 million respectively in 2019.

Chronic respiratory diseases contribute to more than 82,000 annual deaths and the number is rising with increasing environmental pollution/ smoke. Asthmatics were more likely to report history of allergies. The rate of asthma increases as communities become more urbanized. On-going pandemic of COVID19 may have late complications of increasing chronic respiratory diseases.

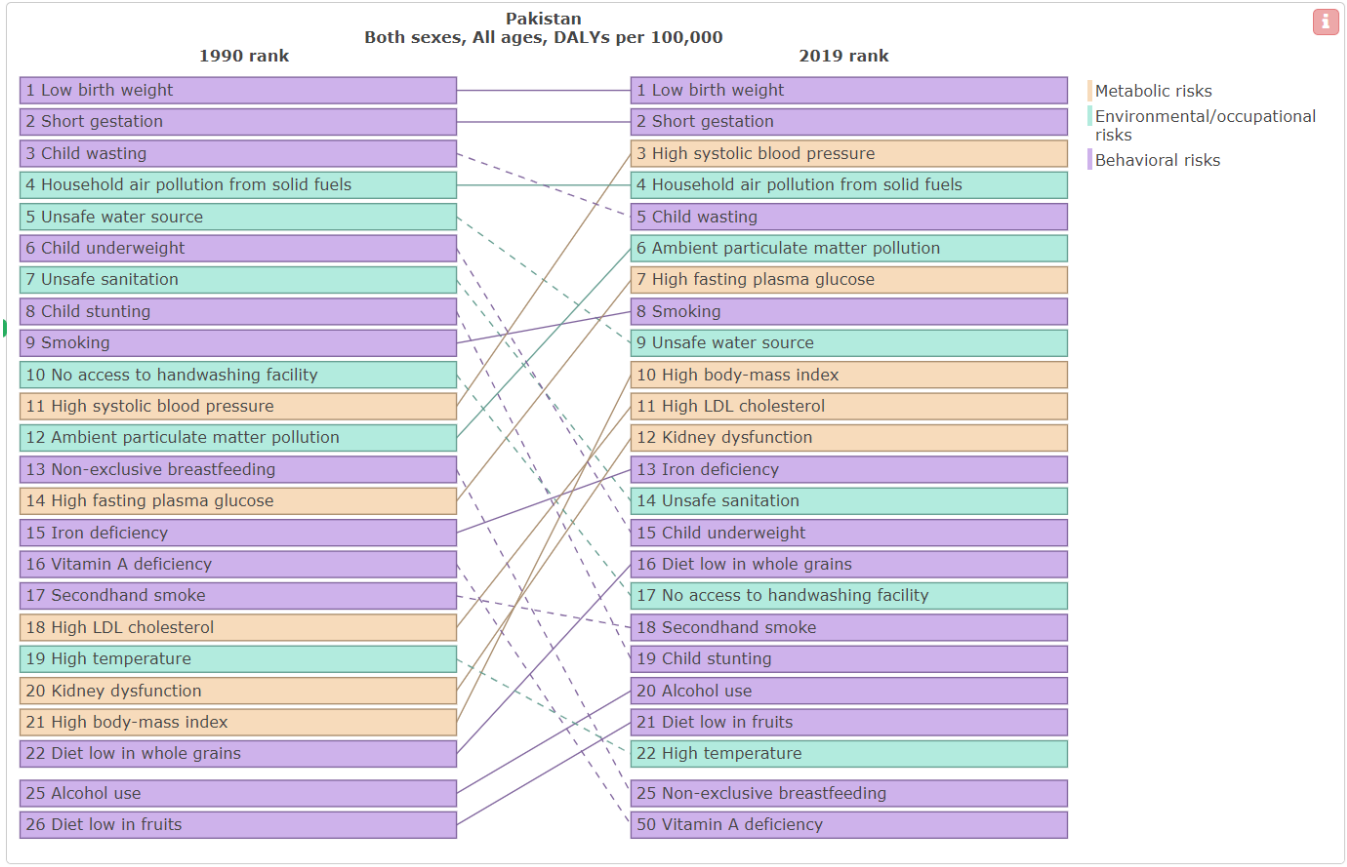
NON-COMMUNICABLE DISEASE RISK FACTORS

A risk factor is a characteristic, condition, or behaviour that increases the possibility of getting a disease or injury. Risk factors for diseases are classified into three major categories:

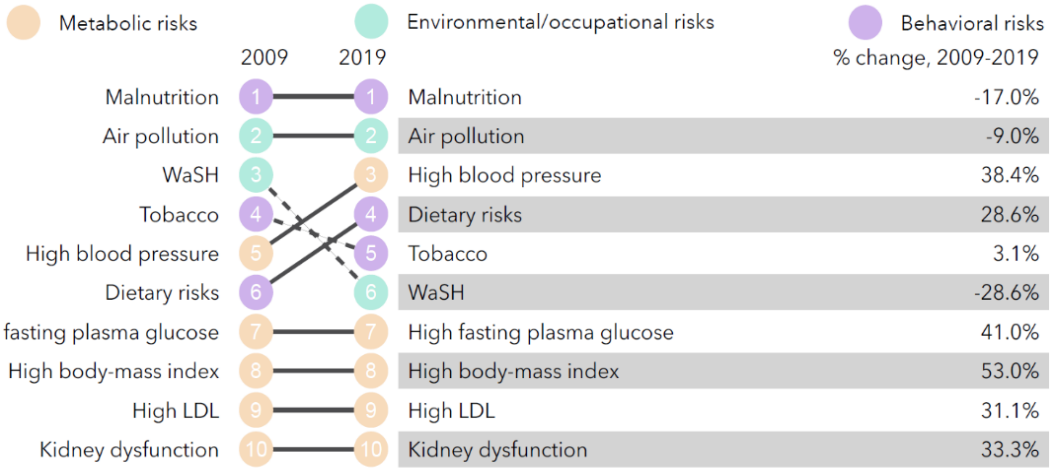
1. Environmental / occupational risks e.g., household air pollution, unsafe water source, unsafe sanitation etc.
2. Behavioural risks e.g., low birth weight, smoking, non-exclusive breastfeeding, etc.
3. Metabolic risks: high systolic blood pressure, high fasting plasma glucose, high body mass index, etc.

At the global level, five major risks are 1) high systolic blood pressure; 2) smoking, 3) high fasting plasma glucose, 4) low birth weight and 5) high body mass index. These risks indicate that global community is currently facing largely non-communicable diseases.

In Pakistan, although risks related to NCD are rising comparatively but risks related to RMNCH and communicable diseases are still highly prevalent. The following picture indicates how risks related to burden of disease have changed in Pakistan since 1990 to 2019.

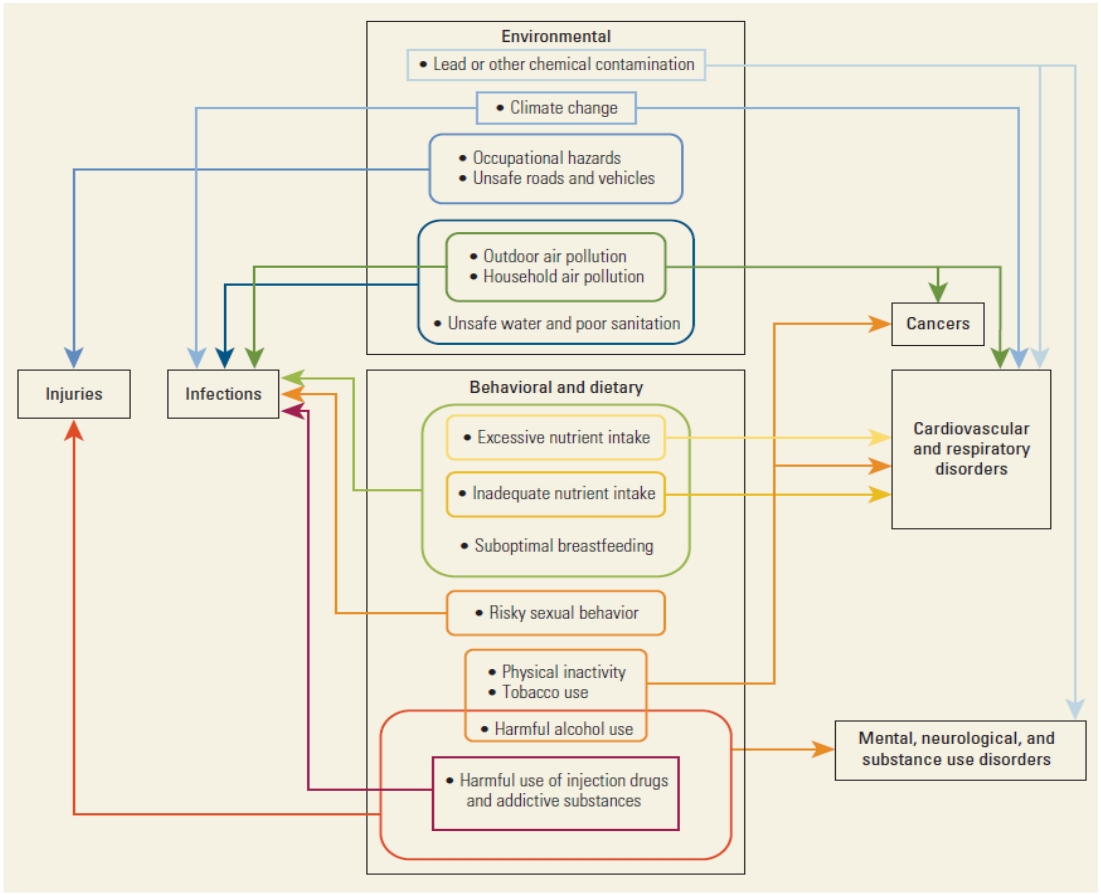


Top ten metabolic, environmental/ occupational and behavioural risks factors for non-communicable diseases in Pakistan (2019) are shown below, which need priority mitigation measures.

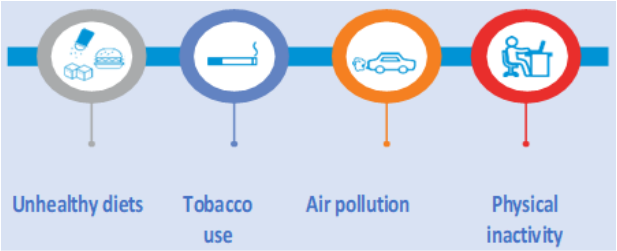


While mitigation of risk factors is important to prevent and control all three groups of diseases i.e., RMNCH & communicable diseases, non-communicable diseases and Injuries, such measures can play a critical role especially in the context of NCD. Further, these are very cost effective considering high catastrophic expenditure that is required to treat NCD.

Conceptual Model of Interactions among Key Risk Factors and Diseases That Can Be Modified



In the context of NCD diseases in Pakistan, key risks factors prioritized include: 1) Unhealthy diets, 2) Tobacco use; 3) Air pollution; and 4) Physical inactivity - also contributing to high plasma glucose and high LDL.

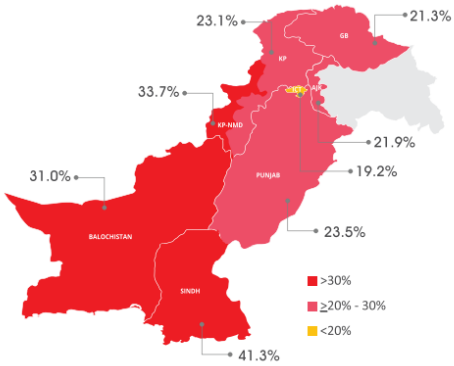


A. Unhealthy diets

Definition of Unhealthy diet is "dietary intake: <7 servings of fruits and/or vegetable in the last 7 days". People in the country consume less fruits than vegetables; on an average fruit is consumed only up to 2.3 days in a week and vegetable over 4.4 days. In terms of achieving recommended daily five servings of fruits and vegetables, 99% do not meet the recommendations.[6]

Diet-related NCD are significant contributors to the overall burden, with diets high in salt & sugar and low in fresh fruit/whole grains. In Pakistan, the nutritional status of children under five years of age is extremely poor. According to National Nutrition Survey findings 2018 the prevalence of stunting and wasting among these children is 40.2% 17.7% respectively.
, The prevalence of underweight among children under five years of age (i.e., weight for age below 2 z-score) is high in all provinces/regions, from 19.2% in ICT to 41.3% in Sindh. The prevalence of underweight is below 20% only in ICT.

Prevalence of Underweight by Province/Region



The anthropometric deficits are systematically higher in rural areas due to the lower socio-economic status and to very poor access to basic health services.

A. Tobacco use

The STEPwise approach to Surveillance (STEPS) survey of 2013-2014[6] shows that prevalence of current tobacco smokers in Pakistan are 13.9% in both genders combined. Smoking is more prevalent among males (27.8%) while 4.2% of the females are smokers in both genders, average age to start smoking is 22.1 (21.4-22.9).

According to GATS 2014, in Pakistan, the prevalence of tobacco product use is very high (19.1%) particularly among men (31.8%) and women (5.8 %). Exposure to second-hand smoke was observed in 86% of restaurants while it was 76% on public transportation, indicating that ban on tobacco use in public places is not being followed.[7] Tobacco use in Pakistan is also on the rise with

[6] PHRC, WHO and M/o NHSR&C, 2016; NCD Risk factors survey (STEPS) - Pakistan
[7] Burden of Tobacco in Pakistan: Findings from Global Adult Tobacco Survey 2014
Muhammad Arif Nadeem Saqib 1, Ibrar Rafique 1, Huma Qureshi 1, Muhammad Arif Munir 1, Rizwan Bashir 2, Babur Wasim Arif 2, Khalid Bhatti 2, Shahzad Alam Khan Ahmed 3, Lubna Bhatti 4

the advent of novel products. Overall, 19.1% adults were currently using tobacco products bifurcated into 12.4% who smoked tobacco, and 7.7% who use smokeless tobacco.

According to GYTS 2013, among the youth (13-15 years of age students), 10.7% of school students (13.3% boys and 6.6% girls) currently use tobacco. Overall, 21.0% of students are exposed to second-hand smoke in their homes and 37.8% were exposed to smoke inside enclosed public places.

Despite having a comprehensive law, the enforcement has been an issue. A recent WHO study implemented by the Pakistan Bureau of Statistics in collaboration with the Ministry of NHSR&C to monitor the compliance to smoke free laws and tobacco advertising, promotion and sponsorship (TAPS) suggested high levels of non-compliance which was around 36%. The study was conducted in hospitals, educational institutions, government and private offices public transport.

B. Air Pollution

In the South Asia, Pakistan ranks as the worst in air pollution measured as particulate matter (PM) (measures PM10).[8] Concentrations of noxious particulate matter (PM) in Pakistan are significantly higher than those found across South Asia.

Pakistan, during the last decade, has seen an extensive escalation in population growth, urbanization, and industrialization, together with a great increase in motorization and energy use. As a result, a substantial rise has taken place in the types and number of emission sources of various air pollutants. However, due to the lack of air quality management capabilities, the country is suffering from deterioration of air quality.

Interventions such as energy efficiency improvements, co-generation of heat and power, fuel switches from coal and oil to natural gas, and carbon capture and storage provide positive impacts on local air quality.[9] In accordance with the WHO's guidelines, the air quality in Pakistan is considered unsafe - the most recent data indicates the country's annual mean concentration of PM2.5 is 58 µg/m3, exceeding the recommended maximum of 10 µg/m3.

Besides indoor air pollution, effect of air pollution from the vehicular and industrial emissions are also a concern as air pollution is increasing in fast urbanizing cities such as Karachi, Lahore. Pakistan's urban air pollution is amongst the most severe in the world. Karachi, the biggest metropolitan city in

[8] Cleaning Pakistan's Air Policy Options to Address the Cost of Outdoor Air Pollution Ernesto Sánchez-Triana, Santiago Enriquez, Javaid Afzal, Akiko Nakagawa, and Asif Shuja Khan World Bank Report 2014

[9] August 2009Environmental Science and Pollution Research 17(1):49-63 DOI:10.1007/s11356-009-0217-2

the country, is reported to be the fifth most polluted city in the world, followed by Peshawar and Rawalpindi.

Contributors to poor air quality in Pakistan include vehicle emissions, solid waste burning, and industrial emissions. Seasonal variations in pollution exist, with the highest levels of air pollution in the winter (December to March).[10]

C. Physical Inactivity

Physical inactivity is described as the absence of body movement, when energy consumption approximates that at resting levels. An inactive lifestyle is a significant root of millions of preterm deaths worldwide each year and results from sedentary behaviour.[11] Poor nutrition and physical inactivity are the main factors of death.[12]

The prevalence of NCD (depression, obesity, premature ageing, musculoskeletal fragility and cardiovascular vulnerability) is also the negative consequence of physical inactivity.[13] Technological advancement impacts the levels of physical activity because it reduces a lot of physical labour. Sedentary leisure time has become attractive due to computers, cell phones, and electronic entertainment. In developing countries, chronic health conditions and non-communication diseases, such as obesity, are mainly associated with physical inactivity.[14] Obesity is considered to be the primary cause for many non-communication diseases (NCD), including diabetes, hypertension, osteoporosis, and stroke.

The main causes of overweight and obesity in Pakistan are unawareness, high-density diet consumption, and physical inactivity. In Pakistan physical inactivity is reported to be more common among women where overall 53% women do not follow WHO recommendations on physical activity. In comparison 25% of the men are reportedly physically inactive. While the physical inactivity data may present an encouraging picture for men, it appears that according to WHO approximately 26% of women in Pakistan suffer from the problem of obesity while 19% of the men are obese. This means that while the men may be more active than women, however, almost one fifth of the male population is obese.

[10] https://www.iamat.org/country/pakistan/risk/air-pollution 2020
[11] World Health Organization. Physical Activity [Internet]. Available from: https://www.who.int/news-room/fact-sheets/detail/physical-activity. Accessed November 18, 2020.
[12] Lees SJ, Booth FW. Sedentary Death Syndrome. Can J Appl Physciol. 2004;29(4):447–460. doi:10.1139/h04-029
[13] Mokdad AH. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238. doi:10.1001/jama.291.10.1238
[14] Blair S., Sallis R., Hutber A., Archer E. Exercise therapy–the public health message. *Scand. J. Med. Sci. Sports.* 2012;**22**:e24–e28. doi: 10.1111/j.1600-0838.2012.01462.

LEAVE NO ONE'S HEALTH BEHIND

RATIONALIZING THE NATIONAL ACTION FRAMEWORK FOR NCD & MENTAL HEALTH

Similar to the situation worldwide, the present burden due to NCD in Pakistan has started to outweigh the burden due to communicable diseases and maternal and child health conditions. NCD not only contribute significantly to the huge disease burden but at the same time can lead to serious socio-economic and development consequences. NCD incur a huge cost on individuals, families and the societies due to the need of lifelong treatments, escalating health care cost and loss of productivity.

The last National Action Plan on NCD was developed in 2004. Since then, various structural changes have materialised in the health system of the country. First and foremost is the passage of the 18th constitutional amendment in Pakistan. By virtue of this amendment health has been largely devolved to the provincial governments. What this has meant on the ground is that every province has the mandate and the authority to develop and implement localized health policies on any health-related matter. Health is a provincial subject with all capacities in terms of human resources, infrastructure development and financial resource allocation now resting within the provincial governments.

After the 18th constitutional amendment, the residual health related functions in the Federal Legislative Lists (Part I & II) of the constitutions were assigned to different federal ministries. To executive federal health functions effectively, the Cabinet decided in May 2013, to create Ministry of National Health Services, Regulations and Coordination (M/o NHSR&C).[15] The ministry is responsible for leadership, national planning (in health), key regulations, health services in federating areas, research and coordination in the health sector of Pakistan.

Since implementation of NCD prevention and control interventions is a multi-sectoral undertaking, it is the prerogative of the federal and provincial governments to coordinate and collaborate with respective line ministries and departments for the implementation of such interventions.

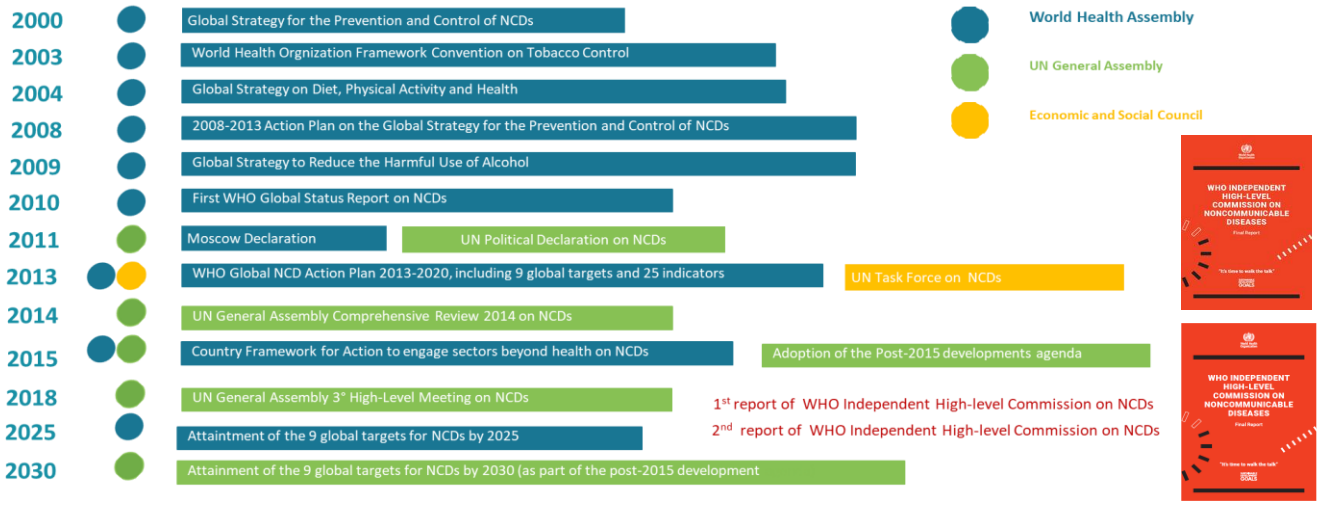
[15] Cabinet Secretariat, 4 May 2013; Memorandum 4-4/2013-Min-I

National Action Framework for prevention and control of non-communicable diseases and mental health, strives to provide a responsive, common and unified direction to overcome various health and inter-sectoral challenges, while ensuring adherence to universal health coverage (UHC) and National Health Vision (NHV) as the ultimate goal.

SETTING THE CONTEXT

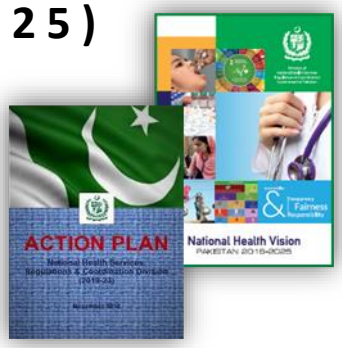
Over last two decades, there have been significant developments at international level. The deadline for achievement of the Millennium Development Goals (MDGs) passed in 2015 and the new Sustainable Development Goals (SDGs) Agenda 2030 was adopted by all nations of the world as a continuation of the MDGs, comprising 17 Goals and 169 targets. The health-specific goal is SDG3, while the NCD related key target within SDG3 is SDG 3.4 (reduction of mortality due to NCD) and 3.8 (universal health coverage as main health outcome).

Additionally, this document is also guided by the WHO Global NCD Action Plan and its 9 global targets and 25 indicators. This document also draws on the WHO Global NCD Action Plan's proposed set of "Best Buys" for developing countries that list low-cost interventions having the greatest potential impact in reducing NCD related morbidity and mortality.



NATIONAL HEALTH VISION (2016-25)

In Pakistan, NAF for NCD & Mental Health takes guidance from the National Health Vision (NHV) 2016-25 and Action Plan (2019-23), which lays significant emphasis on combating NCD, achieving universal health coverage (UHC) and development of inter-sectoral linkages to tackle the emerging double burden of diseases. Health services through packaging of essential health services is also a key pillar.



UHC BENEFIT PACKAGE OF PAKISTAN

UHC is based on the principle that all individuals and communities have equitable access to their needed health care, in good quality, without suffering financial hardship. Disease Control Priorities – Edition 3 (DCP3)[16] defines a model concept of essential universal health coverage that provides a starting point for analysis of priorities. Pakistan is one of the first countries in the world to use the global review of evidence by the DCP3 to inform the definition of its EPHS/ UHC benefit package.

To transform the National Health Vision into reality, one of the key actions was to develop national and provincial/area specific UHC Benefit Packages. 'UHC Benefit Package' consists of i) **Essential Package of Health Services (EPHS)** at five platforms and ii) **Inter-sectoral Interventions/ policies**.

The objective of EPHS documents is to define which services are to be covered through five different platforms (both through public and private sector) for ALL people:

- Community level;
- Primary healthcare centre;
- First level hospital;

District EPHS

- Tertiary hospital; and
- Population level

In addition, inter-sectoral policies also play an important role in moving towards UHC and addressing around half of the burden of disease (BoD) in Pakistan by mitigating risk factors. The localized evidence was used to organise priority services into four clusters:

- Reproductive, maternal, new-born, child, adolescent health & nutrition/ Life course related cluster
- Infectious diseases cluster
- Non-communicable diseases & Injury prevention cluster
- Health services cluster

NAF for NCD and mental health is linked to both EPHS and Inter-sectoral policies in Pakistan at national and provincial/ area level. Package of Essential Non-communicable disease (PEN) interventions is an integral part of UHC - BP. Tools for implementation of NCD related inter-sectoral interventions include:

- Taxes & subsidies;
- Regulations/ legislation;
- Building enabling environment; and
- Information dissemination

Refer to annexure I & II for detailed list of interventions.

[16] http://dcp-3.org/

NEED FOR THE MENTAL HEALTH COMPONENT

Mental Health has been an oft neglected area of health service in Pakistan. Both incidence and prevalence of mental disorders are steadily rising against a background of growing insecurity, economic instability, security challenges and health emergencies including recent COVID-19 epidemic.

The situation, with the massive increases in health problems and limitations in the provision of services in the health sector, has resulted in a growing gap between what is urgently needed for intervention and the resources available. Prior initiatives that have been adopted to address this gap include the efforts to incorporate mental health services in primary health care, which plays a structural role in the health care system.

With the dismal situation regarding the availability of requisite and adequately skilled human resource for providing mental health care services to the people of Pakistan, it is imperative that this critical area is identified early and appropriate measures taken to meet the ever-increasing need of providing mental health services to the people.

NAF FOR NCD AND MENTAL HEALTH - PROCESS IN PAKISTAN

- **2002:** Pakistan endorsed the Prohibition of Smoking and Protection of Non-Smokers Health Ordinance 2002, which included measures to stop smoking in public places and a ban on cigarette advertisements.
- **2003-04:** Pakistan developed an integrated national plan of action, which addressed the four major NCD with common risk factors along with injuries and mental health: The National Action Plan for the Prevention and Control of Non- communicable disease and Health Promotion in Pakistan. Both the policy and plan could not be implemented due to the change in government.
- **2004:** Pakistan adopted the Framework Convention on Tobacco Control (FCTC) and the Ministry of Health (MoH) took several actions to implement control measures.
- **2009:** The MOH proposed the establishment of a National Commission for Prevention of NCD, with public and private partnerships and volunteerism as its driving force. The process of creating the Commission had to stop due to some legal.

- **2014:** NCD STEP risk factor survey was done with WHO's technical and financial support to identify the risk factors associated with NCD and to determine their magnitude in Pakistan. Findings of the Steps Survey was conducted in two provinces of the Punjab and Sindh that provided reliable base-line data on the preventable behavioural & metabolic risk factors of NCD.
- **2014:** Another survey, Global Adult Tobacco Survey was conducted in Pakistan for monitoring adult tobacco use (smoking and smokeless) and tracking key tobacco control indicators. Findings revealed 31.8% of men, 5.8% of women, and 19.1% overall (23.9 million adults) currently used tobacco in any form. Global Youth Tobacco Survey was conducted in Pakistan in same year that exposed 11% of school going children of 12 age 13-15 years were smokers.
- **2014-2015**: Consultation for an effective response to prevent and control NCD and MH started in 2014 with the support of WHO. This was followed by a second meeting in 2015 organized in collaboration with WHO and Aga Khan University (AKU), Karachi.
- **2016:** Provincial consultative meeting on NCD & MH was held in collaboration with WHO that was based on consultations in which regional plan on NCD & MH was discussed.
- **2016**: WHO Mental Health Global Action Program (mhGAP) Situation Analysis of Primary Healthcare (PHC) System was carried out in December 2016, across 5 districts of Pakistan with active engagement and efforts of multiple teams.
- **2016:** Intervention Guide on Mental Health Global Action Program (mhGAP) was developed for mental, neurological and substance use disorders in non-specialized health settings that described findings of the situation analysis carried out to inform the planning of mhGAP implementation in Pakistan, within pilot districts across all provinces. The report also quantified the burden of mental, neurological and substance disorders.
- **2017:** WHO NCD Mission's visit to Pakistan & consultative workshop of key stakeholders was conducted with the aim to carry out a preliminary situation analysis of NCD for its integration in PHC in the 4 provinces of Pakistan.
- **2018:** Two technical working groups (TWGs) were notified for development of NCD & MH Action Framework. 1) NCD & MH Task Force; 2) NCD & MH Technical Working Group. Preliminary consultative meeting to develop NCD Action Framework was held on December 13-14, 2018 at Islamabad. The meeting discussed a report on "Rapid Assessment of NCD Preparedness at the PHC level in the Federal Capital Territory, Islamabad, Pakistan".

- **2018:** WHO regional workshop was held in August 2018 on sensitization of Disease Control Priorities - 3rd edition with support of WHO and University of Washington. In September 2018, the concept was presented in the Inter-Ministerial Health & Population Forum. It was decided to localize global best practices of DCP3 in the context of Pakistan. A joint request was sent to the DCP3 secretariat and Pakistan was selected as the first country in the world to adopt global best practices as UHC Benefit Package of Pakistan.
- **2019-20:** Scientific evidence was localized and used to develop a generic package of Essential Package of Health Services (EPHS)/ UHC Benefit Package of Pakistan, which was endorsed by the Inter-ministerial Health & Population Council on October 22, 2020. The package covered four clusters including i) RMNCH, ii) communicable diseases, iii) non-communicable diseases and mental health, and iv) health services access.
- **2020:** A consultative meeting of the NCD and MH TWG, was also held on October 27, 2020 to draft Non-Communicable Diseases & Mental Health Action Framework with input from provincial/ area representatives, development partners and academics besides members of the TWG.
- **2021:** On the direction of Inter-Ministerial Health & Population Council, evidence was localized at provincial/ area level and used for the development of provincial/ area EPHS documents. Prioritized NCD and mental health interventions are integral part of all EPHS documents.
- **2021:** As decided, the National Action Framework for NCD and Mental health drafted and shared with TWG and other stakeholders for review and finalization. National Advisory Committee finally reviewed the document before getting its endorsement from the Inter-Ministerial Health & Population Council on 11th of November 2021.

Provincial localization

The National Action Framework for NCD and Mental Health will be adopted by the provincial health departments for localization and multisectoral coordination.

VISION, PRINCIPLES, MISSION, GOAL AND OBJECTIVES

Health Vision

"To improve the health of citizens of Pakistan, particularly women and children by providing universal access to affordable, quality, essential health services which are delivered through a resilient and responsive health system, capable of attaining the Sustainable Development Goals and fulfilling its other global health responsibilities"

Guiding Principles

This Action Framework strives to provide a responsive direction to overcome various health challenges related to NCD and menial health, while ensuring advancement in achieving UHC and promoting better health and well-being of the people of Pakistan. The values include:

- Good governance
- Empowerment of people and communities
- Evidence-based strategic prioritization
- Provision of high-quality essential and inter-sectoral services to the needs of people
- Life-course and equity-based approach
- Innovation and transformation
- Leave no one's health behind / Equity and pro-poor approach
- Transparency and accountability
- Integration and inter-sectoral linkages

Mission

"To ensure universal provision of essential package of health services and enhance inter-sectoral response to alleviate the burden of avoidable non-communicable diseases and mental disorders so as to promote good health and well-being"

Goal

The Action Framework will strive to reduce the preventable and avoidable burden of morbidity, mortality and disability due to noncommunicable diseases and mental health disorders by means of health and inter-sectoral collaboration and cooperation at national and provincial/ area levels, so that the population reaches the highest attainable standards of health and

productivity at every age and those diseases are no longer a barrier to well-being or socioeconomic development.

The goal is:

> ***'Reduce by one-third pre-mature mortality from non-communicable diseases (NCD) by 2030, through prevention and treatment, and promote mental health and well-being'***

Targets

The National Action Framework for NCD and Mental health adopts the following nine global targets based on the Global NCD Action Framework 2013-20 (with baseline value of 2010).

1. A 25% relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases
2. At least 10% relative reduction in the mental disorders
3. A 10% relative reduction in prevalence of insufficient physical activity
4. A 30% relative reduction in mean population intake of salt/sodium
5. A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years
6. A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances
7. Halt the rise in diabetes and obesity
8. At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
9. An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases and mental disorders in both public and private facilities

Objectives

The NCD and Mental health Action Framework has adopted the following objectives to prevent and control the avoidable death and illness and ensuring well-being of our people:

1. To strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of noncommunicable diseases and mental disorders
2. To reduce modifiable risk factors for noncommunicable diseases and underlying social determinants through creation of health-promoting environments

3. To strengthen and orient national health system to address the prevention and control of noncommunicable diseases and the underlying social determinants through people-centred primary health care and universal health coverage
4. To promote and support national capacity for high-quality research and surveillance along with development for the prevention and control of noncommunicable diseases and mental health
5. To monitor the trends and determinants of noncommunicable diseases and evaluate progress in their prevention and control.

STRATEGIC AREAS & ACTIONS

This section describes briefly a unified and common set of national, provincial/ area strategic priorities and actions to prevent and control non-communicable and mental disorders. Aligned to the global and national strategic priorities, the national NCD and mental health strategies will further add actions at provincial level, along with further elaboration of the common actions.

This national NCD and Mental health Action Framework builds its narrative on five strategic areas to ensure access, coverage, quality and safety - essential requisite for achieving NCD and mental health related SDGs through an integrated approach and ultimately contributing to the progress on universal health coverage in Pakistan.

The challenges and five strategic actions will form the basis of the over-arching technical support that the federal government and partners will offer and coordinate the provinces/ federating areas.

Strategic Priority

1. GOVERNANCE

Challenges

- Inconsistent high-level commitment towards strategically significant theme of NCD & mental health
- Outdated legislation on NCD & mental health
- Lack of a coherent country-wide multi-sectoral as well as inter-sectoral plan to address the growing burden of NCD & mental disorders
- Primary prevention of NCD is challenged by severe resource restriction at community and PHC centre level
- Low public awareness campaigns on harmful effects of NCD and their risk factors
- Lack of implementation of laws that effect inter-sectoral determinants of NCD

Strategic actions

- Establish a multi-sectoral high-level committee to steer reforms related to NCD and mental health; Activation of NCD and mental health Technical Working Group (TWG) and Inter-Sectoral TWG both at national and provincial level to suggest actions to inter-ministerial health & population council and high-level multisectoral committee
- Develop, revisit and implement NCD & mental health related provincial policies, legislations and guidelines while ensuring high level advocacy
- Resource mobilization/ allocation of budget for implementation of essential package of health services (EPHS) including NCD and mental health interventions and multi-sectoral-sectoral response
- Embed mental health and psychological support along with provision of essential health services in national and provincial emergency preparedness and recovery plans
- Raise public & political awareness on harmful effects of NCD and mental health through mass media communication, social media and other means of communication

Strategic Priority

2. PREVENTION AND REDUCTION OF RISK FACTORS

a) Reduce tobacco use

Challenges

- Non-adherence to the tobacco laws in indoor and public places
- Non-regulation of the sale of cigarettes both at whole sale markets and shops and sale to minors without age verification
- Earlier summary for introducing Health Levy on Cigarettes and sweetened beverages was approved by the Cabinet and included in budget bill (2019-20) by the Finance decision. Finance Division later on decided not to 'ear mark' the collected amount for health sector

Strategic actions

- Stronger implementation of the existing laws, policies, guidelines regarding tobacco cessation and make necessary adjustments in policy priorities
- Regulate effectively the packaging and labelling of tobacco products and require manufacturers to reduce the risks associated with the use of the product or even to ban products that are unreasonably dangerous
- Strengthen the Tobacco Control Cell to accelerate tobacco control activities in Pakistan through multifaceted efforts starting from planning, resource mobilization, institutional strengthening, public-private partnership and monitoring
- Redraft and present summary for introducing heavy Health Levy on Cigarette for adoption and dedicate collected revenue for health sector and specially NCD & mental health
- Raise public awareness on harmful effects of smoking through electronic and print media, social media and other means of communication

b) Use of healthy diet

Challenges

- Enforcement of laws remains poor because of limited inspection resources
- Promotion of non-healthy diet e.g., formula milk

- Poor food security as access to healthy food is limited by poverty and high levels of food inflation
- Lack of access to quality nutritional counsellors and information for general public regarding adoption of healthy diet

Strategic actions

- Steps for implementation of national nutrition policies and guidelines with an aim to enhance the nutritional status, diets, and accordingly promotion of healthy cognitive development
- Ensure access to and availability of affordable, fresh, and nutritious food through fiscal and regulatory measures
- Ensure improvement in nutrition information labelling on food products and front-of-pack labelling of food and drink products in local language
- Develop inter-sectoral policies to regulate food industries on limited use of salt, sugar and trans fatty acid in food products
- Promote use of healthy diet through electronic and print media, social media and other means of communication
- Develop inter-sectoral polices to limit saturated fats and eliminate trans fats

c) Encouraging physical activity

Challenges

- Lack of appropriate infrastructure to promote physical activity
- Lack of access to and affordability of physical activities services such as gyms, playgrounds and sporting avenues
- Low media advocacy and public education to encourage initiate and implement programmes for physical activity promotion
- Lack of proper counselling for physical activities at all levels of health services

Strategic actions

- Legislate and specify standards for existing and new urban planning to utilize open spaces for promoting physical activity
- Initiate programmes for promoting physical activity in the community, schools, private and public institutions, workplaces, health facilities
- Create public awareness/media campaign on the health benefits of physical activity

d) Reduce air pollution

Challenges

- Unregulated industrial emissions are a major challenge
- Excessive increase in the number of vehicles used daily
- Excessive use of biomass fuels (agricultural residues, dung, straw, wood) kerosene fuels and coal for cooking purpose in rural areas of Pakistan serves as a challenge to control air pollution
- Poor ventilation in infrastructure of buildings that contributes in indoor air pollution

Strategic actions

- Facilitate switch to clean energy sources, use of technology to destroy pollutants at the source and choose non-toxic materials to manufacture goods in industries
- Encourage use of fuel-efficient/ electric vehicles
- Subsidies to encourage the use of improved cook-stoves, good cooking practices and use of alternative energy sources for households to improve indoor air quality

Strategic Priority

3. NCD HEALTHCARE

Challenges

- Inadequate health service delivery at health facilities especially at PHC level for control of earlier stages of NCD and mental disorders
- Severe shortage of trained human resource for diagnosis, management and treating NCD & mental health disorders
- Shortage of NCD drugs at all levels is a major challenge
- Lack of good quality emergency care services for treating medical emergencies including myocardial infarction or traumatic injuries
- Poorly functioning referral system needs to be strengthened along with bed registry system of hospitals with PHC centres
- It is a challenge to provide essential package of health services in context of NCD interventions in the public sector when resources are limited

Strategic actions

- Implement NCD related essential interventions at community and PHC centre level through an integrated approach
- Strengthen district hospitals for diagnosis and effective management of NCD, including rehabilitation and palliative care
- Strengthen tertiary care for advanced management of complicated cases including radiotherapy for cancer, cardiac emergency including cardiac surgery, neurosurgery, organ transplantation etc. with ensuring universal social protection
- Ensure availability and sustained supply of medicines & equipment proposed in EPHS at community and PHC centre level
- Establish Cancer clinics at district and tertiary level hospitals for screening, provide palliative & supportive care and to help prevent or relieve cancer symptoms
- Strengthen emergency medical care and rapid referral systems at health facilities by ensure availability of fully equipped ambulances and reliable transportation services, well developed infrastructure at emergency care department, availability of medical equipment and lifesaving medicines.
- Promote tele-medicine services for NCD & mental health both in public and private sector
- Introduce human papilloma virus (HPV) vaccine among school girls

Strategic Priority

4. MENTAL HEALTH SERVICES

Challenges

- Lack of qualified mental health experts at all levels of health facilities
- Lack of basic infrastructure and rehabilitation centres across the country for mental health services that provide 24-hour assistance to public
- Lack of integration of mental health disorders as a core service in primary health care
- Lack of recognition of mental health disorders as a significant challenge in Pakistan
- Expand training opportunities for General Physicians/ medical post graduates for addressing mental health issues
- No real time surveillance on mental health indicators are recorded via any national or provincial survey in Pakistan

Strategic actions

- Provide cost-effective, feasible and affordable preventive interventions through community, PHC, telemedicine and population level platforms
- Include management of anxiety, attention deficit hyperactivity disorders, depression, bipolar disorders, schizophrenia, epilepsy, dementia, headaches, migraine, early childhood development and parenting skills in essential package of health services
- Train PHC centre level service providers in public and private sector, on providing mental health services and psychological support
- Provide people with mental health (including old age mental health) conditions and their families with access to self-help and community-based interventions
- Establish mental health services in general hospitals for out-patient and short-stay inpatient care
- Develop mechanism to continuously provide mental health services during and after emergencies
- Mass information and awareness campaigns for promoting mental health literacy and reducing stigma
- Legislation for stress reduction in occupational health & safety and during obstetric and perinatal care

Strategic Priority

5. SURVEILLANCE, M&E AND RESEARCH

Challenges

- Lack of well-developed integrated disease surveillance system to record regularly burden of NCD deaths and premature mortality
- Data on NCD acquired from multiple disjointed surveys (STEPS, GYTS, GATS)
- Slow process of digitalization of civil registration and vital statistics (CRVS) systems at hospitals to record data
- Lack of regular monitoring/auditing of medicines, supplies and equipment at all health facility levels
- Inadequate research especially on NCD and mental health

Strategic actions

- Establish a robust NCD surveillance system also by setting up disease registries to monitor premature NCD deaths
- Introduce and implement One Health Survey framework including NCD and mental health indicators conducted regularly at national and provincial level
- Strengthen civil registration and vital statistics (CRVS) through improved collection of demographic data as well as age-and cause of death data of NCD and mental health disorders and digitalization of CRVS system and its linkage with provincial and national dashboard
- Establish National Cancer registry at national/provincial level
- Monitor and evaluate the progress of NCD intervention implementation under UHC benefit package across all platforms
- Strengthen collaboration/partnership between national, and international research centres to enhance collaboration among researchers for exchange of knowledge, skills and expertise
- Participate regularly in mental health ATLAS, Dementia observatory, Suicide surveillance system and conduct of mental health survey
- Promote formative research to develop need based preventive and promotive messages related to NCD and mental health

MONITORING FRAMEWORK

Key indicators to monitor the implementation of Action Framework are as following:

FRAMEWORK ELEMENT	TARGET	INDICATOR
MORTALITY & MORBIDITY		
Premature mortality from noncommunicable disease	1. A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	1. Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases
Morbidity from NCD and mental disorders	2. At least 10% relative reduction in the prevalence rate of mental disorders	2. Prevalence rate of mental disorders at national and provincial level with disaggregation of gender
		3. Cancer incidence, by type of cancer, per 100,000 population
BEHAVIOURAL RISK FACTORS		
Physical inactivity	3. A 10% relative reduction in prevalence of insufficient physical activity	4. Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily
		5. Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)
Salt/sodium intake	4. A 30% relative reduction in mean population intake of salt/sodium	6. Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years
Tobacco use	5. A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years	7. Prevalence of current tobacco use among adolescents
		8. Age-standardized prevalence of current tobacco use among persons aged 18+ years
Harmful use of alcohol	6. At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context	9. Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol
BIOLOGICAL RISK FACTORS		
Raised blood pressure	7. A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	10. Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure)

FRAMEWORK ELEMENT	TARGET	INDICATOR
		11. Percent of adult with more than 140 mmHg of systolic and/or ≥85 mmHg of diastolic blood pressure
Diabetes and obesity	8. Halt the rise in diabetes & obesity	12. Age-standardized prevalence of raised blood glucose/ diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose)
		13. Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex)
		14. Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/ m^2 for overweight and body mass index ≥ 30 kg/m^2 for obesity)
		15. Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years
		16. Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day
		17. Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥5.0 mmol/l or 190 mg/dl); and mean total cholesterol concentration
NATIONAL SYSTEMS RESPONSE		
Drug therapy to prevent heart attacks and strokes	9. At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	18. Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk ≥30%, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
Essential noncommunicable disease medicines and basic technologies	10. An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases and mental disorders in both public and private facilities	19. Availability and affordability of quality, safe and efficacious essential noncommunicable disease and mental health medicines, including generics, and basic technologies in both public and private facilities
		20. Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food

FRAMEWORK ELEMENT	TARGET	INDICATOR
		supply, as appropriate, within the national context and national programmes
		21. Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus, according to national policy
		22. Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt
		23. Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants
		24. Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies
		25. Proportion of PHC facilities with at least one staff trained on mhGAP

Outcome level indicators are:

SDG 3.8.1 Coverage of Essential Healthcare Services measured through UHC Service Coverage Index (SCI)

SDG 3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income

Both indicators have reflection of NCD & mental health. UHC SCI consider following 16 proxy indicators.

a: Reproductive, maternal, new-born, child and health & nutrition

- Family Planning;
- Antenatal and Delivery care;
- Child Immunization;
- Health Seeking behaviours for Child Illness (Pneumonia)

b: Infectious diseases

- Tuberculosis Effective Treatment;
- HIV&AIDS Anti-Retroviral Treatment;
- Insecticide Treated Nets Coverage for Malaria;
- Adequate Water and Sanitation

c: Non-communicable diseases

- Blood Pressure;
- Diabetes Mellitus;
- Cervical Cancer Screening;
- Tobacco Control

d: Service Capacity and Access

- Hospital Beds Density;
- Essential Health Workforce density;
- Access to Essential Medicines, Vaccines and Commodities;
- Capacities for International Health Regulations

FINANCING

The Government of Pakistan has finalized a generic costed Essential Package of Health Services / UHC benefit package that is to be implemented across five levels of health service delivery. Provincial/ area level localization has also been done considering local situation, milestones and priorities. NCD and mental health interventions are included. Province wise number of all interventions, unit cost and DALYs avert details are as following in 2021. Cost and DALYs avert will increase on annual basis considering milestones and inflation rate.

Punjab EPHS:

Platform	Immediate Priority Interventions	Unit Cost ($)/ person/ year (inclusive of health system cost)	DALYs Avert in 2021-22
1. Community level	23	2.23	1,367,648
2. PHC centre level	39	2.91	4,090,875
3. First level hospital	41	6.81	2,488,247
District EPHS	**103**	**12.53**	**7,946,772**
4. Tertiary hospital	22	10.80	1,156,977
5. Population level	12	1.47	++
All five platforms	**137**	**24.80**	**9,103,748 ++**

- An addition of **10 interventions through special initiatives** will cost US$6.13/ person/ year and will avert additional 447,899 DALYs through District EPHS.

Sindh EPHS:

Platform	Immediate Priority Interventions	Unit Cost ($)/ person/ year (inclusive of health system cost)	DALYs Avert
1. Community level	21	2.91	565,518
2. PHC centre level	37	4.22	1,836,851
3. First level hospital	36	10.95	510,871
District EPHS	**94**	**18.09**	**2,913, 240**
4. Tertiary hospital	25	7.29	539,236
5. Population level	12	3.36	++
All five platforms	**131**	**28.66**	**3,452,476 ++**

- An addition of **10 interventions through special initiatives** will cost US$6.48/ person/ year and will avert additional 279,460 DALYs through District EPHS.

Khyber Pakhtunkhwa EPHS:

Platform	Immediate Priority Interventions	Unit Cost ($)/ person/ year (inclusive of health system cost)	DALYs Avert
1. Community level	21	3.74	530,138
2. PHC centre level	35	3.28	1,255,150
3. First level hospital	42	9.28	925,205
District EPHS	**98**	**16.30**	**2,710,492**
4. Tertiary hospital	22	8.15	342,263
5. Population level	12	4.47	++
All five platforms	**132**	**28.92**	**3,052,755 ++**

- An addition of **11 interventions through special initiatives** will cost US$6.14/ person/ year and will avert additional 119,612 DALYs through District EPHS.

Balochistan EPHS:

Platform	Immediate Priority Interventions	Unit Cost ($)/ person/ year (inclusive of health system cost)	DALYs Avert
1. Community level	19	4.22	929,667
2. PHC centre level	39	3.22	242,123
3. First level hospital	38	12.46	162,027
District EPHS	**96**	**19.90**	**1,333,817**
4. Tertiary hospital	25	4.40	83,000
5. Population level	11	4.63	++
All five platforms	**132**	**28.93**	**1,416,817 ++**

- An addition of **10 interventions through special initiatives** will cost US$2.61/ person/ year and will avert additional 22,533 DALYs through District EPHS.

Gilgit Baltistan EPHS:

Platform	Immediate Priority Interventions	Unit Cost ($)/ person/ year (inclusive of health system cost)	DALYs Avert
1. Community level	19	2.32	70,764
2. PHC centre level	41	2.61	64,199
3. First level hospital	36	6.27	31,983
District EPHS	**96**	**11.20**	**166,946**
4. Tertiary hospital	**22**	4.94	8,565
5. Population level	**10-12**	15.63 - 85.21	++
All five platforms	**128-130**	**31.77 …**	**175,511++**

- An addition of **11 District interventions through special initiatives** will cost US$4.49/ person/ year and will avert additional 2,525 DALYs through District EPHS.

Azad Jammu & Kashmir EPHS:

Platform	Immediate Priority Interventions	Unit Cost ($)/ person/ year (inclusive of health system cost)	DALYs Avert in 2021-22
1. Community level	21	3.28	55,048
2. PHC centre level	35	3.21	141,495
3. First level hospital	42	11.04	99,432
District EPHS	**98**	**17.54**	**295,976**
4. Tertiary hospital	22	2.95	20,971
5. Population level	12	7.29	++
All five platforms	**132**	**27.77**	**316,947**

- An addition of **12 interventions through special initiatives** will cost US$4.19/ person/ year and will avert additional 9,135 DALYs through District EPHS.

Intersectoral interventions/ policies are being prioritized from the 71 DCP3 recommended interventions.

The success of the NCD and Mental Health Action Framework and UHC Benefit Package is dependent on high-performance health financing based on:

- funding levels that are adequate and sustainable
- pooling that is sufficient to spread the financial risks of ill-health
- spending that is efficient and equitable to assure desired levels of health service coverage, quality, and financial protection for all people with resilience

On the direction of Inter-Ministerial Health & Population Council, the Ministry is also working to develop a health financing strategy to ensure enhanced generation of resources for health, pooling of funds, purchasing and provision of services.

ANNEXURES

ANNEXURE 1: NCD/ MENTAL HEALTH GLOBAL BEST PRACTICES FOR EPHS

No.	Level of Healthcare	DCP3 recommended EUHC interventions (**Bold interventions are the High Priority Package**)
1	PHC centre	Screening and management of hypertensive disorders in pregnancy (Also included in NCD package of services)
2	PHC centre	Screening and management of diabetes (gestational diabetes or pre-existing type II diabetes) (Also included in NCD package of services)
3	Community level	**Provision of vitamin A and zinc supplementation to all children according to WHO guidelines and provision of food supplementation to women and children and food insecure households** (Also included in NCD package of services)
4	Community level	Exercise based pulmonary rehabilitation for patients with obstructive lung disease (Also included in NCD package of services)
5	Community level	**School based HPV vaccination for girls** (Also included in Cancer package of services)
6	Community level	Life skills training in schools to build social and emotional competencies (Also included in Mental health package of services)
7	PHC centre	Psychological treatment for mood, anxiety, ADHD and disruptive behaviour disorders in adolescents (Also included in Mental health package of services)
8	Population level	Mass media messages concerning sexual and reproductive health and mental health for adolescents (Also included in HIV and Mental health packages of services)
9	Population level	**37. Mass media messages concerning healthy eating or physical activity** (Also included in CVD and Musculoskeletal packages of services)
10	Population level	Mass media messages concerning use of tobacco and alcohol (Also included in CVD and Musculoskeletal packages of services)
11	Community level	**38. Provision of iron and folic acid supplementation to pregnant women, and provision of food or caloric supplementation to pregnant women in food-insecurity households** (Also included in CVD package of services)
12	PHC centre	Hepatitis B vaccination for high-risk populations, including healthcare workers, IDU, MSM, household contacts and partners with multiple sex partners (Also included in Cancer package of services)
13	PHC centre	**Provision of harm reduction services such as safe injection equipment and opioid substitutions therapy to people who inject drugs** (Also included in Mental health package of services)
14	PHC centre	Long-term combination therapy for persons with multiple CVD risk factors, including screening for CVD in community setting using non-lab-based tools to assess overall CVD risk
15	PHC centre	Low-dose inhaled corticosteroids and bronchodilators for asthma and for selected patients with COPD
16	PHC centre	Provision of aspirin for all cases of suspected acute myocardial infarction

No.	Level of Healthcare	DCP3 recommended EUHC interventions (**Bold interventions are the High Priority Package**)
17	PHC centre	Screening and management of albuminuria kidney disease with ACEi or ARBs, including targeted screening among people with diabetes
18	PHC centre	Screening and management of diabetes among at-risk adults, including glycaemic control, management of blood pressure and lipids and consistent foot care
19	PHC centre	Secondary prophylaxis with penicillin for rheumatic fever or established rheumatic heart disease
20	PHC centre	**Treatment of acute pharyngitis for rheumatic fever**
21	PHC centre	Long term management of ischemic heart disease, stroke and peripheral vascular disease with aspirin, beta blockers, ACEi and statins to reduce risk of further events
22	PHC centre	**Medical management of heart failure with diuretics, beta blockers, ACEi and mineralocorticoids antagonists**
23	PHC centre	Tobacco cessation counselling and use of nicotine replacement therapy in certain circumstances
24	First-level hospital	Management of acute coronary syndromes with aspirin, unfractionated heparin and generic thrombolytic (when indicated)
25	First-level hospital	Management of acute coronary exacerbations of asthma and COPD using systemic steroids, inhaled beta-agonists and if indicated oral antibiotics and oxygen therapy
26	First-level hospital	**Medical management of acute heart failure**
27	Tertiary-level hosp	Management of acute ventilator failure due to acute exacerbations of asthma and COPD
28	Tertiary-level hosp	Retinopathy screening via telemedicine, followed by treatment using laser photocoagulation
29	Tertiary-level hosp	Use of percutaneous coronary intervention for acute myocardial infarction where resources permit
30	Community level	**Psychological support and counselling services for individuals with serious, complex or life-limiting health problems and their caregivers**
31	PHC centre	**Essential palliative care and pain control measures including oral immediate release morphine and medicines for associated symptoms**
32	First-level hospital	**Management of bowel obstruction**
33	Tertiary-level hosp	**Treatment of early-stage breast cancer with appropriate multimodal approaches (including generic chemotherapy) with curative intent for cases detected by clinical examination at health centres and first level hospitals**
34	Tertiary-level hosp	**Treatment of early-stage colorectal cancer with appropriate multimodal approaches (including generic chemotherapy) with curative intent for cases detected by clinical examination at health centres and first level hospitals**
35	Tertiary-level hosp	**Treatment of early-stage childhood cancers (such as Burkett and Hodgkin lymphoma, acute lymphoblastic leukaemia, retinoblastoma and Wilms tumour) with curative intent in paediatric cancer units or hospitals**
36	Community level	Self-managed treatment of migraine
37	PHC centre	Interventions to support caregivers of patients with dementia
38	PHC centre	**Management of bipolar disorder using generic mood-stabilizing medications and psychological treatment**

No.	Level of Healthcare	DCP3 recommended EUHC interventions (**Bold interventions are the High Priority Package**)
39	PHC centre	**Management of depression and anxiety disorders with psychological and generic antidepressants therapy**
40	PHC centre	**Management of epilepsy, including acute stabilization and long-term management with generic anti-epileptics**
41	PHC centre	**Management of schizophrenia using generic anti-psychotic medications and psychological treatment**
42	PHC centre	Screening and brief intervention for alcohol use disorders (Also included in Injury package of services)
43	PHC centre	Exercise programmes for upper extremities injuries and disorders
44	PHC centre	Calcium and vitamin D supplementation for primary prevention of osteoporosis in high-risk individuals
45	First-level hospital	Calcium and vitamin D supplementation for secondary prevention of osteoporosis
46	Tertiary-level hosp	**Elective surgical repair of common orthopaedic injuries (for example meniscal and ligamentous tears) in individuals with severe functional limitation**
47	Tertiary-level hosp	**Urgent, definitive surgical management of orthopaedic injuries (for example open reduction and internal fixation)**
48	PHC centre	Targeted screening for congenital hearing loss in high-risk children, using optoacoustic testing
49	First-level hospital	**In settings where sickle cell disease is a public health concern, universal new born screening followed by standard prophylaxis against bacterial infections and malaria**
50	First-level hospital	In setting where specific single-gene disorders are a public health concern (for example thalassemia), retrospective identification of carriers plus prospective (premarital) screening and counselling to reduce rates of conception
51	First-level hospital	Universal new-born screening for congenital endocrine or metabolic disorders (for example congenital hypothyroidism, phenylketonuria) that have high incidence rates and for which long-term treatment is feasible in limited resource settings
52	Tertiary-level hosp	**Repair of cleft lip and cleft palate**
53	Tertiary-level hosp	Repair of club foot
54	Community level	Early identification of lead poisoning and counselling of families in remediation strategies for sources of environmental exposure
55	Community level	Parent training of high-risk families, including nurse home visitation for child maltreatment
56	First-level hospital	Management of intoxication / poisoning syndromes using widely available agents e.g., charcoal, naloxone, bicarbonate, antivenin
57	Community level	WASH behaviour change interventions, such as community led total sanitation (Also included in Environmental package of services)

ANNEXURE II: NCD RELATED INTER-SECTORAL POLICIES TO REDUCE RISKS

DCP3 recommended inter-sectoral policies and interventions (**Bold interventions are the HPP**)	**Instrument**
1. Risk domain – ADDICTIVE SUBSTANCE USE	
Substance use: impose large excise taxes on tobacco, alcohol and other addictive substance	Fiscal
Substance use: impose and enforce strict regulation of advertising, promotion, packaging and availability of tobacco and alcohol	Regulation
Smoking control: ban smoking in public places	Regulation
Alcohol control: setting and enforcement of blood alcohol concentration limits	Regulation
2. Risk domain – DIET	
Iron and folic acid: Fortify food	Regulation
Iodine: Fortify salt	Regulation
School feeding: ensure that subsidized foods and school lunches have adequate nutritional quality	Regulation
School feeding: finance school feeding for all schools and students in selected geographical areas	Regulation
- Excessive nutrient intake	
Salt: impose regulations to reduce salt in manufactured food products	Regulatory
Salt and sugar: provide consumer education against excess use, including product labelling	Information and education
Sugar sweetened beverages: tax to discourage use	Fiscal
Transfats: ban and replace with polyunsaturated fats	Regulatory
3. Risk domain – ENVIRONMENTAL	
- Air pollution	
Indoor sources: ban on kerosene as a source of household fuel	Regulatory
Indoor sources: halt the use of unprocessed coal as a household fuel	Regulatory
Indoor sources: promotion of kitchen retrofits to reduce household air pollution	Information and education
Indoor sources: regulations on building codes that ensure adequate ventilation	Regulation
Indoor sources: subsidize clean alternatives to kerosene such as liquid propane gas (LPG)	Fiscal
Indoor sources: subsidies to promote the use of low emission household energy devices and fuels	Fiscal
Fossil fuel emissions: dismantle subsidies for and increase taxation of fossil fuels (except LPG)	Fiscal
Fossil fuel emissions: measure to reduce diesel use, including engine retrofits and transition to compressed natural gas for fleets	Build environment
Fossil fuel emissions: regulate transport, industrial and power generation emissions	Regulatory
Fossil fuel emissions: relocation of brick kilns and retrofits for emission control	Build environment
Fossil fuel emissions: subsidies to renewable energy	Fiscal
Fossil fuel emissions: tax emissions and /or auction off transferable emission permits	Fiscal
Fossil fuel emissions: enhance clean fuel distribution networks	Build environment
Non-emission outdoor sources: Establish or strengthen municipal street cleaning and trash collection measures	Regulatory
Non-emission outdoor sources: fines for residual trash burning	Fiscal

DCP3 recommended inter-sectoral policies and interventions (**Bold interventions are the HPP**)	**Instrument**
Non-emission outdoor sources: impose and enforce measures to control non-emission sources of air pollution, including road and construction dust	Regulatory
Greenhouse gases: regulate CO2 and methane emissions (including cap and trade)	Regulatory
Greenhouse gases: tax CO2 and methane emissions	Fiscal
- Occupational	
Animal husbandry: hygiene enforcement measures, including education, in occupations that involve animal husbandry	Regulatory
Medical workers: introduce safe injection devices, such as blunt tip suture needles	Build environment
Occupational safety: setting and enforcement of occupational safety standards	Regulatory
Hazardous occupations: setting and enforcement of regulations on the use of personal equipment in hazardous occupations	Information and education
- Water supply and sanitation	
WASH: establish quality WASH facilities in schools, workplaces, public spaces and healthcare facilities	Build environment
WASH: targeted WASH subsidies to poor and vulnerable groups	Fiscal
WASH: enact national standards for safe drinking water and sanitation within and outside households and institutions	Regulatory
- Toxic substances	
Hazardous waste: legislation and enforcement of standards for hazardous waste disposal	Information and education
Hazardous waste: restricted access to contaminated sites	Regulatory
Hazardous substances: regulations on child-resistant containers for hazardous substances (e.g., paraffin, paracetamol, etc.)	Regulatory
Pesticides: enact strict control and move to selective bans on highly hazardous pesticides	Regulatory
Silica: engineering controls to decrease release of silica and other toxins	Build environment
Arsenic: monitoring of groundwater supplies and provision of alternatives if needed	Regulatory
Asbestos: banning of import, export, mining, manufacture and sale	Regulatory
Lead exposure: concessionary financing for remediation of worst cases of lead contamination	Fiscal
Lead exposure: take actions to reduce human exposure to lead, including bans on leaded fuels and phase-out of lead-based consumer products	Regulatory
Toxic emissions: established and enforced toxic element emissions for air and water	Regulatory
Mercury: monitoring and reduction or elimination of use in artisanal mining, large scale smelting and cosmetics	Regulatory
4. Risk domain – INJURIES	
- Other injuries	
Suicide prevention: decriminalization of suicide	Regulatory
Interpersonal injury prevention: stricter licensing laws and reduced availability of firearms and ammunition	Regulatory
Gender equity: micro-finance combined with gender equity training	Fiscal
Gender equity: school-based programmes to address gender norms and attitudes	Information and education
5. Risk domain – OTHERS	
Exercise: take steps to develop infrastructure enabling pedestrians and bicyclists	Build environment

MOVING TOGETHER
TO BUILD A HEALTHIER PAKISTAN
UNIVERSAL HEALTH COVERAGE

DCP3 Disease Control Priorities
economic evaluation for health

World Health Organization

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