HEALTH POLICY

Azad Jammu & Kashmir

Department of Health

Azad Govt. of the State of Jammu & Kashmir

September 2022

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Approved

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Acronyms

AJ&K	Azad Jammu and Kashmir
BHUs	Basic Health Units
CDC	Communicable Disease Control
DALYs	Disability Adjusted Life Years
DCP	Disease Control Priorities
DHS	Demographic Health Survey
DHQs	District Headquarters
EPI	Expanded Program on Immunization
FY	Fiscal Year
GBD	Global Burden of Diseases
GDP	Gross Domestic Product
HMIS	Health Management Information System
LHSs	Lady Health Supervisors
LHV	Lady Health Visitors
LHWs	Lady Health Workers
MCH	Maternal & Child Healthcare Centers
MDGs	Millennium Development Goals
MICS	Multi-Indicator Cluster Survey
MNCH	Maternal Newborn and Child Health
NCD	Non Communicable Diseases
PDHS	Pakistan Demographic and Health Survey
RHCs	Rural Healthcare Centers
SDGs	Sustainable Development Goals
TB	Tuberculosis
UHC	Universal Health Coverage
UN	United Nations
UNDP	United Nations Development Program
UNICEF	United Nations Children Fund
WHO	World Health Organization

Preface

Health is essential to keeping human life active, and the world of health has seen many changes in a few decades. When many epidemics arose, many inventions were brought forward in science to solve them. Any country's development and prosperity are linked to its people's health. Many developed countries of the world are witness to the fact that development is impossible without strengthening the health sector. Only healthy people can bring sustainable development and progress.

The geopolitical status of Azad Jammu and Kashmir calls for a more compassionate approach toward strengthening the Health System. The ever-increasing health risks, environmental changes, and people's vulnerabilities call for a robust health system to meet evolving needs. The Azad Government of the State of Jammu and Kashmir is fully aware of the challenges and committed to building a resilient, integrated, universal, patient-centred, and cost-effective health system which can facilitate public equality. Azad Jammu & Kashmir has gone through several small-scale and large disasters. Each disaster brings many challenges to the health sector. The recent Global Pandemic (COVID-19) has changed the perspective on health.

These challenges have demanded the formulation of a comprehensive Health Policy. Therefore, with the support of the United Nations Development Program, the Department of Health AJ&K has initiated the formulation of Health Policy. Adopting an inclusive process and targeting all the sub-sectors of health, a comprehensive policy is developed that aligns with the national health vision 2025 and Sustainable Development Goals.

The core features of the Policy include restructuring the overall health sector and increasing the efficiency and quality of service provision, strengthening the health workforce, focusing on preventive health, disease and mortality surveillance, drug regulations, and a digital integrated health system. The Policy will guide to build of a more robust preventive and curative health system, improving the effectiveness of inventions, targeted approach to reducing mortality, and improving governance through institutional strengthening. The Policy will pave the way for financial sustainability and integrated approaches to working with other sectors to achieve Universal Health Coverage, early detection and response to emerging health risks.

The Department of Health would like to extend gratitude and appreciation to all individuals and representatives of various organizations who contributed invaluably to developing this, Health Policy. Congratulations to all the officers of the Health Department who worked tirelessly and played their part in shaping this Policy. The technical support of the UNDP Consultant, Dr Jasim Anwar, is admired and appreciated. Special thanks to UNDP for their continued support in formulating this comprehensive Policy.

Maj General Ahsan Altaf Satti
Secretary to Health
Azad Government of the State of Jammu & Kashmir

Foreword

Nisar Ansar Abdali
Minister for Health
Azad Government of the State of Jammu & Kashmir

The Azad Government of the State of Jammu and Kashmir is committed to achieving the Sustainable Development Goals. The Government is committed to ensuring the provision of quality health care services to all citizens of AJ&K without financial hardship. The first ever Health Policy of AJ&K was developed through an inclusive process and is a landmark in the history of AJ&K.

A comprehensive health policy will pave the way for a sustainable, efficient, responsive, and inclusive health system. The health policy will enable the Government to utilize available resources effectively and efficiently to improve all health. The Policy provides guidance to improve health outcomes, boosting economic growth and good governance. A paradigm shift is needed to improve preventive and promotive health activities.

The AJ&K's Health Policy guides to respond to financial challenges by providing the overarching framework to ensure that required resources needed to achieve UHC are raised sustainably, allocated according to the need, and efficiently utilized. The Policy provides a foundation for all health sector stakeholders to work together to address current and future health challenges.

Successful implementation of this Health Policy will improve the quality of health care in AJ&K. I urge all health policymakers, managers and stakeholders to consider AJ&K Health Policy recommendations and to put them into practice. By working together, I am sure we can achieve universal health coverage and the Sustainable Development Goals in the State of Azad Jammu & Kashmir.

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Chapter 1

Introduction

1.1 Introduction

Azad Jammu and Kashmir (AJ&K) is a self-governing state within the federation of Pakistan. It has a distinct status of being federally supported, similar to Gilgit-Baltistan. The Government of AJ&K after the 18th Constitutional Amendment, the Government of AJ&K, received greater autonomy in managing its health care system. This has presented an opportunity to the Department of Health, AJ&K to reform the health system and devise a common, integrated and sustainable framework of the health system according to which efforts by all the stakeholders could be streamlined. The health sector encompasses organized public and private health services, non-governmental organizations, civil society organizations, professional associations, industries, training, research institutions, and other institutions that directly provide input to the health system. AJ&K's first health policy was developed in 1996 with the prime goal of achieving health for all by 2000. The dynamics of health and priorities for healthcare have changed over time. In order to meet these challenges and future population needs, it is imperative to revise the health policy to improve the quality of life and the health systems in AJ&K.

1.2 Demographic Profile

The State of Azad Jammu and Kashmir is a self-governed jurisdiction administered by Pakistan. The territory shares a border with Gilgit-Baltistan, referred to by the United Nations and other international organizations as "Pakistan Administered Kashmir." The territory also borders Pakistan's Punjab province to the south and Khyber Pakhtunkhwa province to the west. To the east, the State of Azad Jammu and Kashmir is separated by the Indian Occupied Kashmir through the Line of Control, the de-facto border between India and Pakistan. Azad Jammu and Kashmir have three divisions; 1) Muzaffarabad, 2) Poonch, and 3) Mirpur. These divisions are divided into ten districts: Muzaffarabad, Neelum, Jhelum Valley (Hattian Bala), Bagh, Haveli, Poonch, Sudhnoti, Kotli, Mirpur, and Bhimber. These districts are further divided into 32 Tehsils.

The population of AJ&K for 2022 is 4.39 million, with 2.15 million males and 2.24 million females. The population is predominantly rural, with 83% living in rural areas. The annual population growth rate is 1.64%. The population density of AJ&K is 330 persons per sq. km. with a total area of 13,297 square km (Planning and Development Department AJ&K, 2020). District-wise details are given in Table 1.

Table 1. District-wise Area, Projected Population & Density of AJ&K, 2021

District	Area (per km^2)	Growth Rate*	Population Census 2017	Projected 2021			
				Population (in million)	Density (person per km^2)	Male	Female
Muzaffarabad	1,642	1.91	0.650	0.702	427	0.353	0.343
Neelum	3,621	2.23	0.191	0.209	58	0.104	0.104
Jhelum Valley	854	1.74	0.231	0.247	289	0.124	0.124
Bagh	770	1.47	0.372	0.394	512	0.185	0.206
Haveli	598	1.64	0.152	0.162	271	0.083	0.083
Poonch	855	1.04	0.501	0.522	610	0.245	0.276
Sudhnoti	569	1.50	0.298	0.316	555	0.154	0.165
Kotli	1,862	1.69	0.774	0.828	445	0.393	0.435
Mirpur	1,010	1.66	0.456	0.487	482	0.248	0.238
Bhimber	1,516	1.77	0.420	0.451	298	0.217	0.228
AJ&K	13,297	1.64	4.045	4.317	325	2.118	2.201

Source: AJ&K Bureau of Statistics, Statistical Year Book, 2020,

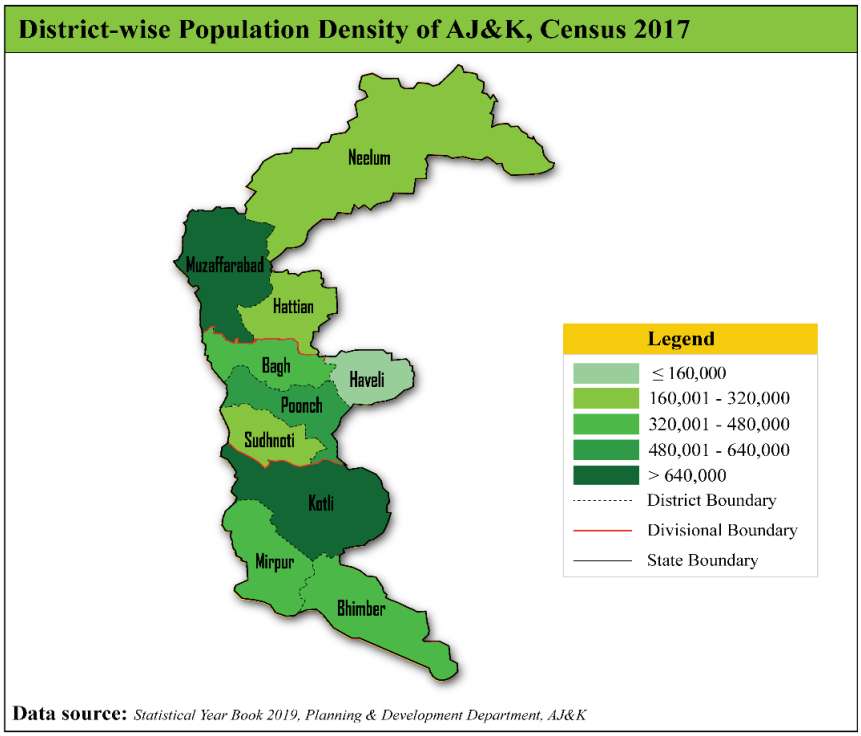

Figure 1. Population Density of AJ&K, Census 2017

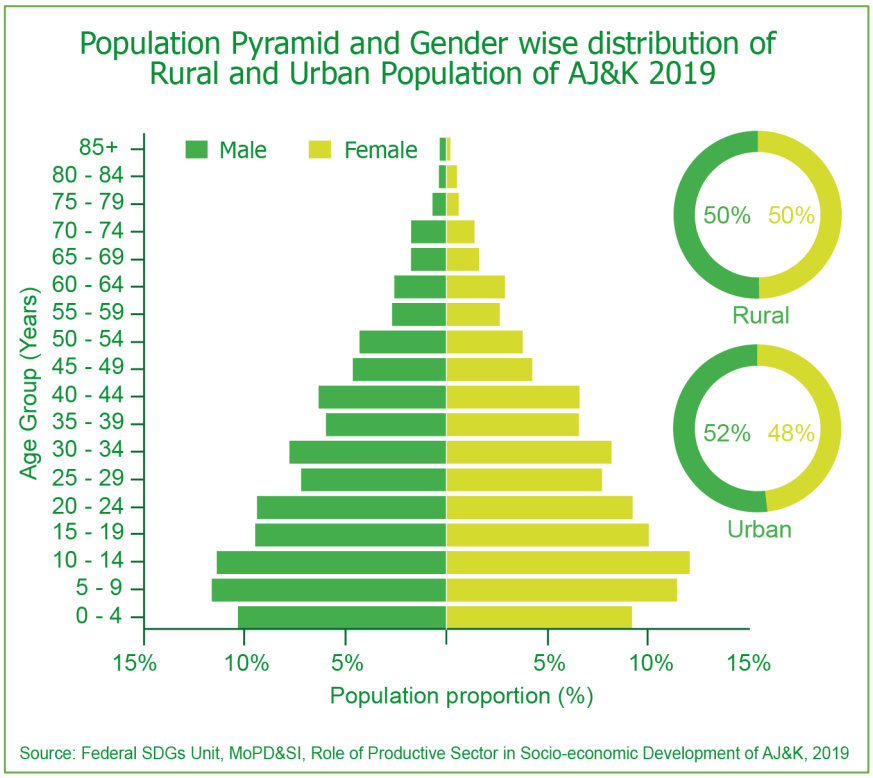

Figure 2. Population pyramid with rural and urban distribution, AJ&K, 2019

1.3 Human Development Index

The Human Development Index, introduced by United Nations Development Programme (UNDP), emphasizes considering the people and their abilities as the criteria for the country's development and not just economic growth (UNDP, 2020). As per the National Human Development Report 2020, Azad Jammu and Kashmir is the most developed region compared to other provinces of Pakistan (UNDP, 2020). AJ&K has a Human Development Index of 0.62, higher than Pakistan. This is due to higher sub-indices, especially in education. The State's literacy rate is 76.8%, considerably higher than the national average of 60%in 2019-20 (Table 2).

Table 2. Azad Jammu & Kashmir Human Development Index

Human Development Index 2020	0.62
Immunization Rate	86.7
Satisfaction with health facility	66.3
Expected Year of Schooling	12.2
Mean years of Schooling	4.8
Living Standard	80

Source: UNDP Human Development Index Report 2020

1.4 Key Health Indicators

According to 'The Pakistan Maternal Mortality Survey 2019, published by the National Institute of Population Studies, the Maternal Mortality Ratio is 186 for Pakistan and 104 in Azad Jammu and Kashmir per 100,000 live births. The infant mortality rate of AJ&K for 2017 was 47 per 1,000 live births (Health Department GoAJK, 2017), and that of Pakistan, estimated by Demographic Health Surveys 2017-18, is 62 per 1,000 live births (National Institute of Population Studies (Pakistan) and ICF International, 2018). The life expectancy at birth is 67.7 years. It is slightly higher in females (70 years) than males (66 years). The immunization coverage of AJ&K has decreased from 94% in 2017 to 83% in 2019 (Planning and Development Department AJ&K, 2020). The percentage of households where washing hands was observed is 99.3%, out of which 68.5 had soap and water.

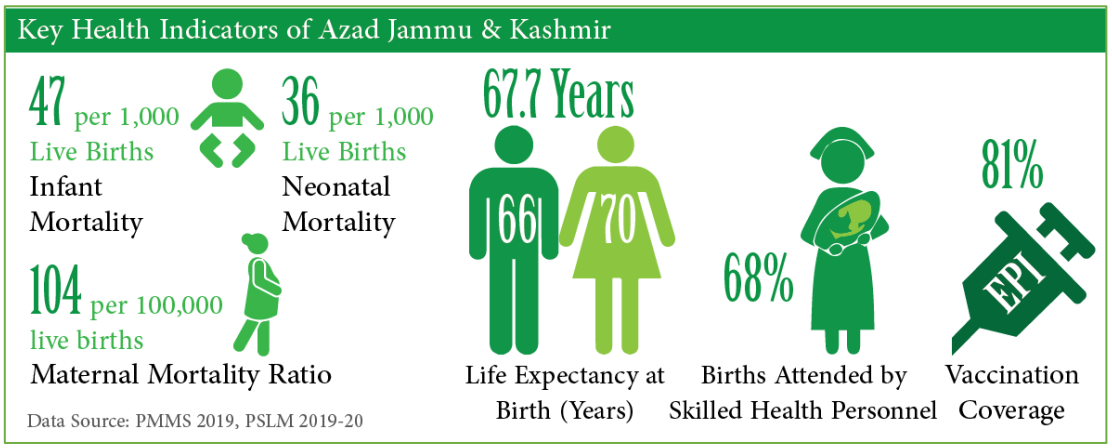

Figure 3. Socio-economic indicators of Azad Jammu & Kashmir

Coverage is generally higher in urban than rural areas for the key maternal and child health indicators, except for timely breastfeeding and oral rehydration treatment with continued feeding (National Institute of Population Studies (Pakistan) and ICF International, 2018). The coverage of key child health interventions along the continuum of care is not very high in AJ&K. These challenges have arisen due to the lack of equitable and inclusive health policy, resulting in stark disparities in the health sector.

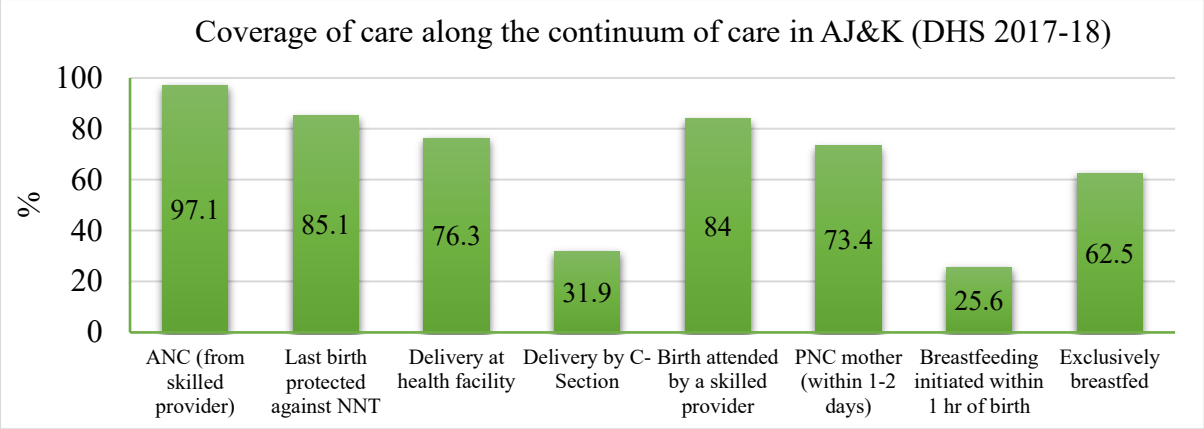

Figure 4. Coverage of care along the continuum of care in AJ&K (DHS 2017-18)

1.5 Poverty in AJ&K

Several studies showed that poverty is the major cause of poor health outcomes. In AJ&K, approximately 18% of the population lives below the national poverty line, and 25% are multidimensionally poor. According to the Benazir-Income Support Program, National Socioeconomic Registry 2010-2011, a mean score of 16.17 was set as a cut-off point as a proxy measure of poverty at a household level (BISP, 2011). AJ&K scored 29, higher than the mean poverty scores of all provinces and regions. The overall incidence of poverty (or proportion of households below the 16.17 cut-off) in Pakistan is estimated at 28%.

1.6 Health Infrastructure

The healthcare delivery system in AJ&K is comprised of Basic Health Units (BHUs), Rural Healthcare Centers (RHCs), Tehsil Headquarters Hospitals, District Headquarters Hospitals (DHQs), Teaching Hospital, and Maternal and Child Healthcare Centers (MCHs), Dispensaries, Tuberculosis Center and Malaria Centers. The total number of beds in these facilities is approximal 3810, with a population of 1097 per bed (AJ&K Department of Health, 2022). The status of the health care facilities in Azad Jammu and Kashmir is presented in Figure 5, and the district-wise status of health facilities is in Table 3.

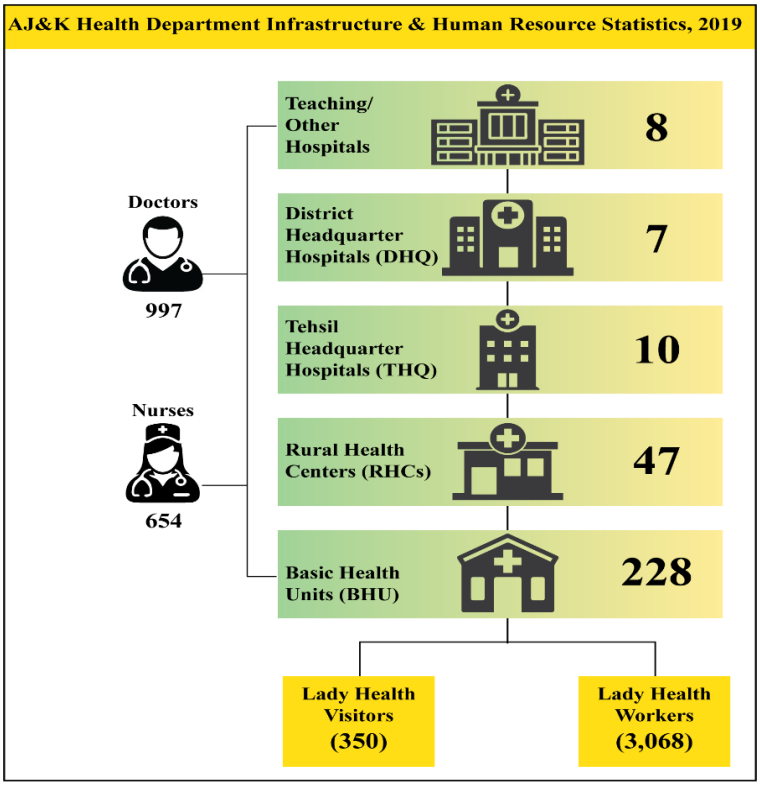

Figure 5. Health Department AJ&K, infrastructure and human resource statistics, 2019

Table 3. District-wise number of health facilities of AJ&K, 2022

District	Hospitals	RHCs	BHUs	Dispensaries	MCH Centers	TB Centers	FAPs	FAPs (Un.app.)	Total
Neelum	2	1	20	1	9	4	10	9	56
Muzaffarabad	4	6	36	14	38	8	40	15	161
Bagh	3	10	22	9	28	9	17	23	121
Poonch	3	5	33	0	28	5	26	16	116
Sudhnuti	2	3	17	4	13	4	18	31	92
Kotli	5	6	34	18	30	9	62	46	210
Mirpur	3	5	24	10	24	5	11	26	108
Haveli	1	1	7	10	4	4	10	8	45
Jhelum Valley	1	6	10	3	11	5	14	1	51
Bhimber	2	3	25	12	16	6	20	28	112
AJ&K	26	46	228	81	201	59	228	203	1072

Source: Department of Health, AJ&K 2022

Abbreviations: RHCs, Rural Healthcare Centers; BHUs, Basic Health Units; MCH, Maternal & Child Healthcare Centers; TB, Tuberculosis

Chapter 2

An Appraisal of The Existing Health System

2.1 An Appraisal of the existing health system

The situation analysis covered the social determinants of health and health needs, including current and projected disease burdens and health challenges. The assessment of expectations, including current and projected demand for services and social expectations, assessment of health system performance, and performance gaps in responding to the needs and expectations, were assessed. Health system resources (human, physical, financial, informational) and resource gaps in responding to needs and expectations, and assessment of stakeholder positions (including, where appropriate, external partners) were examined. Financial sustainability, fiscal position, and budgetary allocations were analyzed. Human resources' current status and needs were assessed, including the status of undergraduate and post-graduate teaching needs and capacity issues.

2.2 Conceptual Framework for Appraisal

The framework developed by the Center for Disease Control and Prevention's framework for evaluation in public health evaluation (CDC, 2021) and was used to evaluate the health programs of AJ&K in this report.

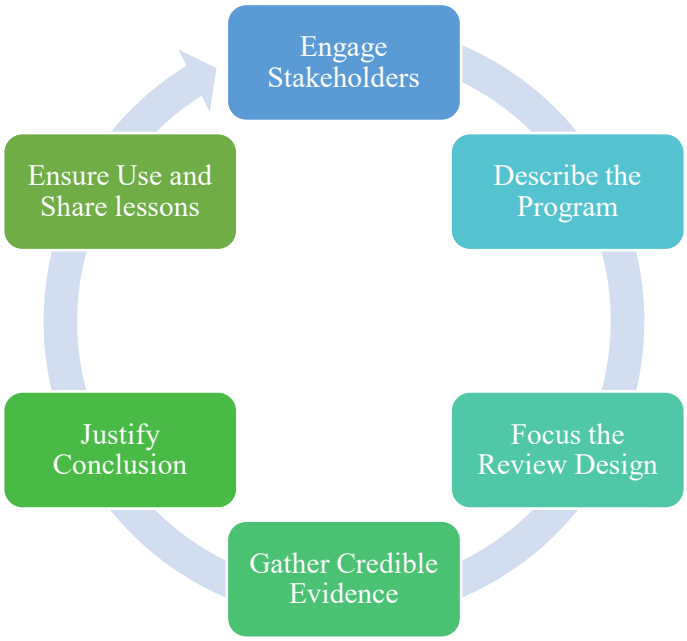

Figure 6. Conceptual Framework for Program Review, AJ&K 2021

2.3 Expanded Program on Immunization

The EPI was launched in Pakistan with six antigens (Bacille Calmette-Guerin, Measles, Diphtheria, Pertussis, Tetanus, and Polio) in 1978. Later, the Hepatitis B vaccine, pentavalent vaccine, Pneumococcal vaccine, Inactive Polio vaccine, and Rotavirus vaccine were introduced in 2002, 2009, 2012, 2015, and 2017. The pilot project of the EPI program was started in 1978 in AJ&K. From 1982 onwards, the EPI program AJ&K is running under the development scheme. The EPI Program successfully maintained high coverage of vaccine-preventable diseases in AJ&K. The State has been declared a polio-free State for the last 21 years due to the close coordination of the Expanded Program on Immunization and Polio Eradication Initiative. The programme has sufficient human resources in all districts of AJ&K. Cold Chain Equipments were installed in 249 EPI centres in 2019. A warehouse was constructed and operationalized in AJ&K. Data Quality Assessment was conducted in 2018 about routine immunization and scored 84% compared to 39% in 2016. A comprehensive EPI review was

conducted in 2018, and AJ&K scored 91%. The surveillance system for Vaccine-Preventable Disease and Adverse Events following Immunization is functional in the State, and the Vaccine-Preventable Disease bulletin is published weekly. The rotavirus Vaccine has been included in routine immunization.

Although EPI programme coverage is above 80%, its coverage in hard-to-reach areas is still low, further aggravated by the rugged terrain and harsh weather conditions. Moreover, solar refrigerators are required in remote areas of AJ&K due to the unavailability of electricity. Furthermore, other challenges include resource allocation for the sustainability of the National Immunization Support Project in the EPI Program, timely releases of the developmental budget, and poor staff mobility. The situation analysis of routine immunization of AJ&K from 2010 to 2019 showed an increase in the overall coverage of the vaccines included in the EPI programme, as shown in Table 4.

Table 4. Situation Analysis of Routine Immunization AJ&K, 2022

Indicators	Administrative Data (%)								PDHS (%)		Administrative (%)
	2010	2011	2012	2013	2014	2015	2016	2017	2018		2019*
Penta 1	98	-	100	99	98	101	100	91	78	92	92
Penta 3	96	-	98	97	96	99	98	88	74	84	89
Measles 1	94	-	96	95	94	97	96	87	73	83	88
Measles 2	92	-	94	93	92	95	94	77	64	83	78
Oral Polio Vaccine 0	90	-	92	91	90	93	92	70	59	93	72
Fully Immunized Child	89	-	90	89	89	91	90	87	73	75	88
Access and demand											
Bacille Calmette-Guerin Coverage	-	-	-	96	96	97	95	87	74	98	87
Dropout P1–P3	4	3	3	4	3	3	3	3	5	-	3
Dropout P1–MCV1	4	5	5	4	5	5	5	4	7	-	4
Drop out MCV–1, MCV–2	14	8	5	14	8	5	5	13	12	-	10
New vaccines were introduced into the routine schedule											
Inactivated Polio Vaccine (2016)	-	-	-	-	-	-	82	88	83	-	89
Rotavirus–1	-	-	-	-	-	-	-	-	55	-	92
Rotavirus II March 2018)	-	-	-	-	-	-	-	-	46	-	90

Abbreviations: MCV, Measles Antigen-Containing Vaccines; PDHS, Pakistan Demographic & Health Survey

* Data as of Jan–June 2019

Similarly, the district-wise trend of coverage of the EPI programme over the last six months of the year 2021 noted that district Neelum had the highest EPI coverage compared to all other districts of the AJ&K.

2.4 National Program for Family Planning and Primary Health Care

National Program for family planning and primary healthcare is operational at the community level in the State of AJ&K. The existing staff was regularized from July 2012. The salary component was shifted on the recurrent budget of GoAJ&K from July 2017. However, there has been no allocation for the operational budget. The population covered by Lady Health Workers (LHWs) is 2.9 million (69% of the total population) (Department of Health AJ&K, 2021). The current programme's strength in terms of human resources is at 3300 LHWs, Lady Health Supervisors (LHSs), and support staff.

The LHW's purpose is to ensure the provision of primary, preventative, promotive, and curative care services, mainly in remote rural and urban slum communities, with the primary objective of providing these services at the community level, particularly for women and children.

Table 5. Performance indicators of Lady Health Workers Program, AJ&K 2016–20

Indicators	2016	2017	2018	2019	2020
Tetanus –Toxoid	97%	98%	98%	97%	98%
Deliveries Through Skilled Birth Attendant	81%	86%	90%	88%	88%
Contraceptive Prevalence Rate	51%	50%	49%	49%	48%
Infant Mortality Rate per 1000 live births	27	25	25	27	28
Maternal Mortality per 100,000 live births	110	109	106	67	74

Source: Regional Office National Program for Family Planning and Primary Health Care AJ&K, 2021

The LHW programme faces several significant systemic challenges that limit its ability to meet its health outcome targets and programme objectives. These include a freeze on the recruitment of LHWs, and a lack of adequate funding for supplies, equipment, and operations.

2.5 National Mother Neonate and Child Health Programme

The Health Department initiated the programme in AJ&K in 2006. It successfully provided emergency obstetric and newborn care services through 11 facilities offering comprehensive emergency and newborn care, 58 health facilities providing round-the-clock basic emergency and newborn care, and 135 health facilities providing preventive services. The non-availability of funds, significant delays in releases, and reduced budget allocations from the Federal Government, including channelizing releases from FCDO, significantly impede the effective execution of programme activities. Over the last eight financial years, the programme in AJ&K has been allocated 61% of the approved project cost, and around 69% of the allocated amount was released.

2.6 Community Nutrition Programme

The Integrated Community Nutrition Programme was started by collaborating with WHO, UNICEF, and EFP. The health department initiated the implementation the Integrated Community Nutrition Program in five Districts (Muzaffarabad, Bagh, Jhelum Valley, Neelum, and Haveli), suffering from high stunting rates, and wasting; forms of malnutrition. One hundred and thirty-two Integrated Community Nutrition Programme centres were established to treat and manage 10.6% of moderate acute malnutrition and 6.7% of severe acute malnutrition children, and 14% of moderate acute malnutrition women of childbearing age. A Nutrition Stabilization Center is in the establishment process at Abbas Institute of Medical Sciences and Muzaffarabad to treat complicated severe acute malnutrition children, while a big warehouse acquired from World Food Programme is in the installation process.

2.7 Communicable Disease Control Program

The morbidity rate and trend of the endemic and epidemic disease remained at the threshold level. Amongst the vector-borne diseases, there was a threat of Dengue fever. Special efforts were made, and the Prime Minister took the case to allocate funds and legislation. The funds were acquired to implement the Dengue Control Program under the recently promulgated legislation, Dengue act 2020.

2.8 Hepatitis Control Program

The programme is making arrangements for hepatitis B vaccination for all high-risk groups and increasing awareness among the public by organizing workshops. Poor and needy patients suffering

from hepatitis B and C are provided with accessible treatment facilities. Strengthen the lab facility by providing equipment like ELIZA to five significant hospitals of AJ&K, and one PCR lab is expected to start working this year.

2.9 Status of Nursing and Medical colleges

Three medical colleges in AJ&K were established in the near past, lack the governance mechanism, and have been mainly managed on ad-hoc bases. The lack of medical universities hampers the examination system. Teaching Cadre was established, and a faculty development programme was initiated where faculty rationalized reducing expenses. The ratio of Nurses to doctors and Nurse and other paramedics to the population is scarce in AJ&K. A nursing college and up-gradation of the college of nursing in Mirpur are being carried out. Nevertheless, the gaps in human resources in nursing are to be filled.

2.10 Fiscal Analysis

Budgetary comparisons of the health sector and other sectors show that the health sector's share has increased from 7% in 2010-11 to 9% in 2017-18. The development budget has fluctuated over the years and shows the highest 9% share in 2012-13 (Figure 7). Detailed figures are presented in Annexe 5.

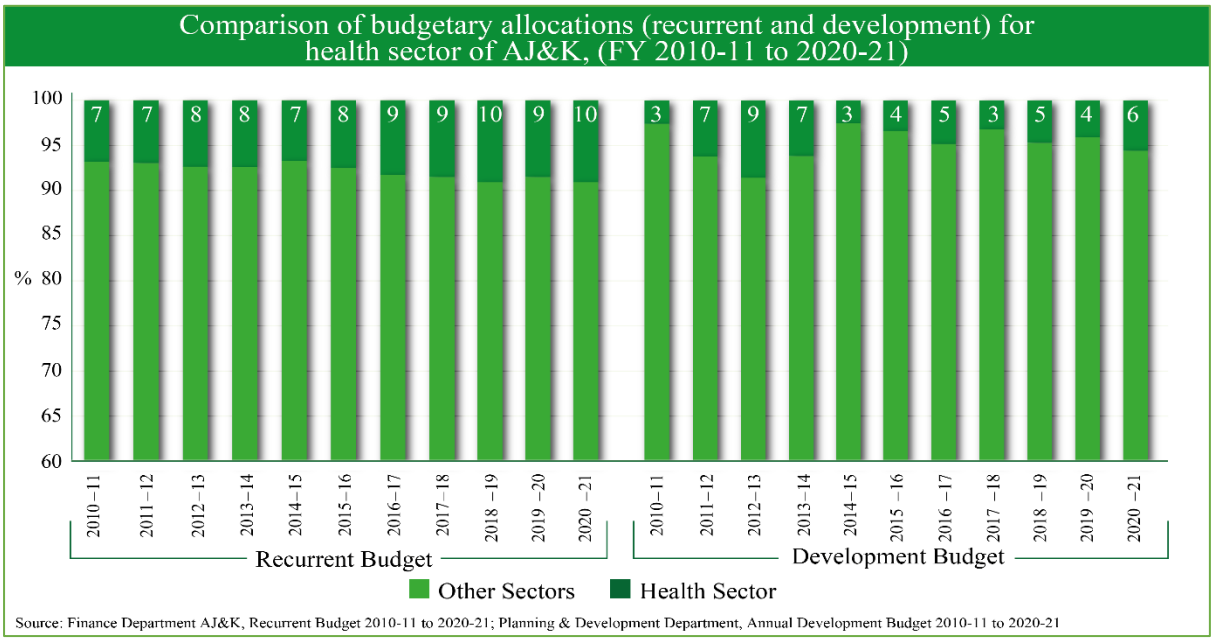

Figure 7. Budgetary Allocations (recurrent and development), Health Sector, AJ&K, 2022

The analysis of the health department budget for the fiscal year 2021-22 noted that Rs. 11,183 million was allocated for AJ&K. Of which, an amount of Rs 9,838 million (88%) was spent on salaries and utilities. The remaining Rs. 791 million (7%) was utilized for out-of-state treatment, medicine, and equipment. An amount of Rs. 554 million (5%) was spent on mobility, maintenance, and other expenses (Figure 8).

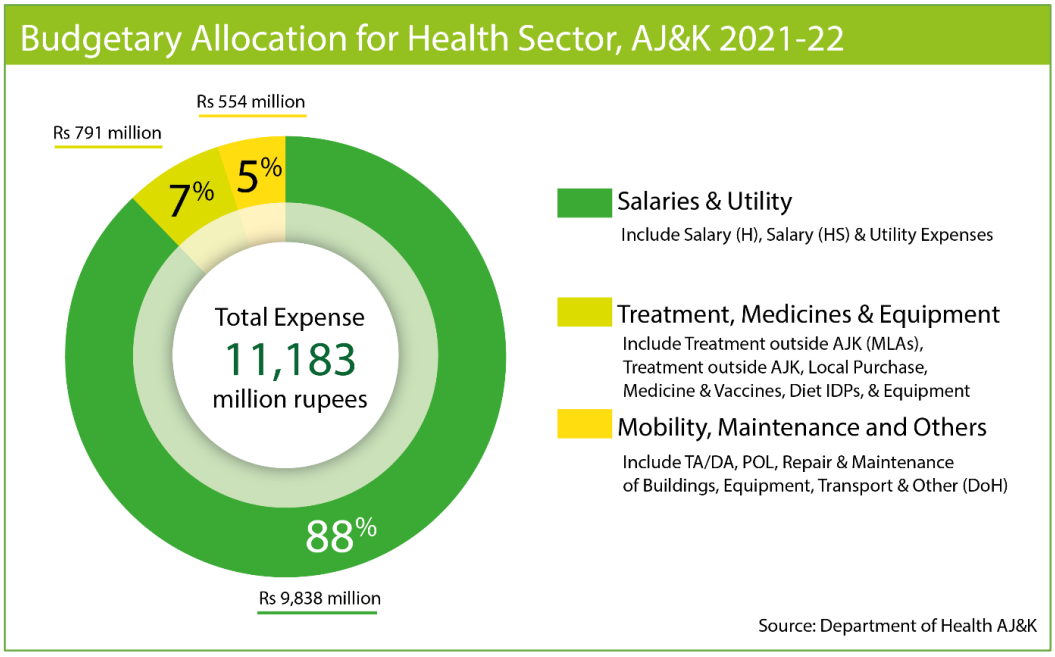

Figure 8. Budgetary Allocations for Health Sector, AJ&K 2021-22

2.11 Sustainable Development Goals in AJ&K

In 2015, 193 countries of the world adopted the 17 Sustainable Development Goals (SDGs) and 169 targets and 247 indicators to be achieved by 2030 (United Nations, 2015). The global agenda for development delineated through the 17 SDGs has further highlighted the pre-eminence of health, as ensuring healthy lives and taking steps to promote human health of all ages is considered essential to sustainable development. Sixteen SDGs are directly or indirectly related to health. Across these 11 goals, there are 28 health-related targets with 47 indicators (Lim et al., 2016).

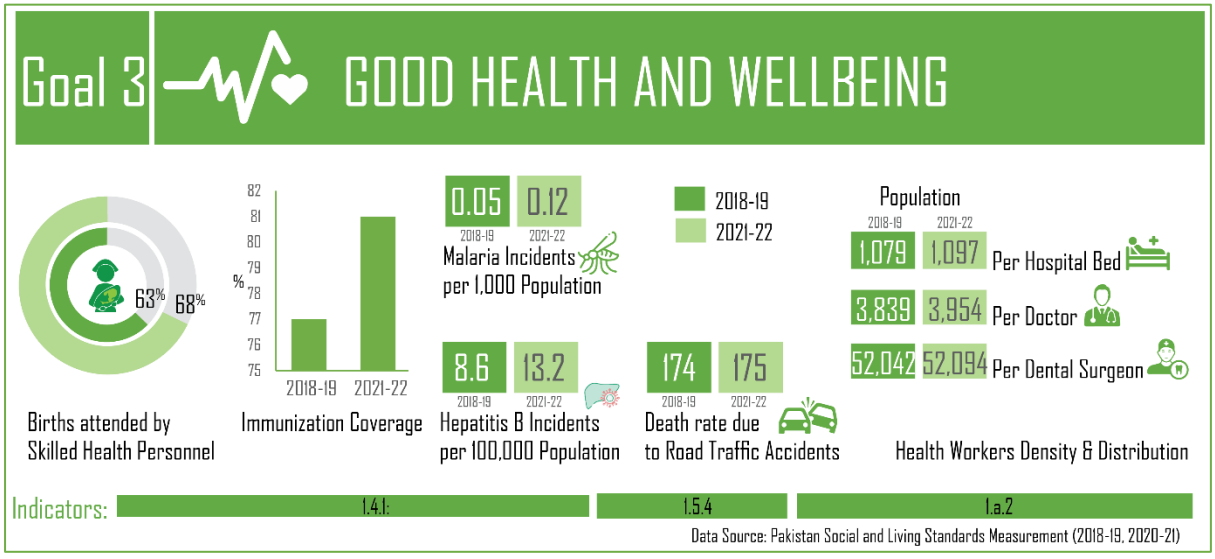

Figure 9. Progress of Health Indicators of AJ&K, 2018-19 & 2020-21

2.12 Private Health Sector

In Azad Jammu and Kashmir, the private sector is unregulated. The information on private sector composition, service coverage, quality, and pricing continues to be patchy. The regulation of hospitals

and clinics in Azad Jammu and Kashmir remains grossly overlooked. Purchasing private health services have been more widely practised in Azad Jammu and Kashmir. Public-Private Partnership with an improved regulatory framework is regarded as helpful for the private sector's quality of health care. An overarching policy in the private sector to guide legislation and clarify regulatory objectives is essential. Gaps in existing legislation need to be addressed. The sanctions for misconduct need to be reviewed and set at appropriate levels while at the same time seeking out ways to incentivize compliance, such as creating greater transparency around the performance of the private sector, informing patients and health insurance beneficiaries of their rights, and boosting consumer protection activities.

2.13 Regulatory Mechanisms

Growing quackery, unchecked private hospitals clinics and labs/suboptimal performance of public sector hospitals, and lack of quality control guidelines in both private and public sector hospitals are formidable challenges to be tackled to protect the quality of healthcare in AJ&K. In pharmaceutical operations, no drug regulatory authority exists in AJ&K, which has uncontrolled the pharma sector, and the quality of drugs is always questionable. A significant delay in the disposal of court cases due to non-existing separate drug courts hampering healthcare quality. Positions of District Drug Inspectors and hospital pharmacists are not available in all districts. Due to deficient staff and other resources, the drug testing lab at Mirpur is inadequately equipped to provide the services.

2.14 Disease Control Interventions

Services of the CDC Section are underutilized due to a lack of linkage with the district health setup due to its vertical nature. A weak disease surveillance system for communicable diseases results in delays in epidemic control and response to epidemics. Drug Regulatory Authority Pakistan has established a Pakistan National Pharmacovigilance centre under pharmacy services, Islamabad, to monitor the safety of drugs, medicines, and therapeutic goods. A pharmacovigilance centre has been established in AJ&K to assist health care professionals in understanding the importance of monitoring adverse drug reactions and the four essential components of an adverse drug reactions case report to improve drug safety. The overburdened and inadequate supporting staff is limiting the effective implementation of drug regulation and requires immediate attention.

2.15 Human Resources in Health

Azad Jammu and Kashmir have one of the lowest densities of health workers in the region, with an essential health professional (physicians including specialists, nurses, lady health visitors, and midwives density of 1.14 per 1,000 population. This is lower than the indicative minimum threshold of 4.45 physicians, nurses, and midwives per 1,000 population necessary to achieve universal health coverage. Significant mismatches in the needs, demand, and supply of health workers lead to inequitable distribution and deployment of the health workforce (TRF, 2013). In AJ&K and GB, 8,566 doctors are required by 2030 (at the rate of 1.11 per 1,000 population) (Government of Pakistan, 2018). Which the current production of 400 doctors per year, an estimated gap of 1,857 doctors may remain by 2030.

Table 6. Analysis of Human Resources in the Health Sector of AJ&K, 2010-2020

Description	2010 (n)	2015 (n)	% Change	2019 (n)	% Change
Doctors^	714	1002	+40%	1057	+5%
Population per doctor*	5986	5058	-16%	3954	+22%
Dental surgeons	67	76	+13%	79	+4%
Nurses	314	370	+18%	654	+77%
MCH Technicians		336		350	+4%
Paramedics	2844	2448	-40%	2617	+7%
Population per bed**	1762	1158		1097	

*WHO standard for a doctor-to-population ratio is 1:1,000
**WHO Standard is five beds per 1,000 population
^ Include: medical specialists, medical officers, health managers
Source: AJ&K at a Glance (2010, 2015, 2019)

Table 7. Gazetted and Non-Gazetted staff of Health Department in AJ&K, 2022

Designation/Positions	Number of Staff
Medical Officers	707
Specialists	317
Dental Surgeons	79
Nurses	703
Paramedics	3,054
Admins	64
Other Support Staff	8,169
Total	13,093

Source: Department of Health, AJ&K 2022

The attrition rate of health professionals is very high due to several social, economic, and job-related factors. A significant number of female doctors simply do not join the labour market after getting married due to family reasons. The migration of a significant number of health professionals abroad is another factor contributing to the high attrition rate. The number of doctors attaining post-graduate qualifications in AJ&K is increasing. However, due to a lack of postings, and clarity of placements in the medical colleges and tertiary care facilities, their retention has become a challenge. The legislative HRH framework is fragmented. The regulatory powers are insufficient to enforce standards, lift workforce quality, or generate sufficient resourcing to monitor and enforce compliance with standards. In addition, data quality is insufficient to support workforce planning, risk management, or health

It is noted that most of the Medical Officers are designated in DHO offices (35.6%) and DHQ hospitals. There are 317 Specialists in AJ&K, and most of them, 50%, are working in DHQ hospitals. The Dental Surgeons are only 79, and most of them, 45.6%, are posted in DHO Offices. The total Nurses in AJ&K are 703, and most of them, 54.8%, are working in DHQ hospitals, and every 13 (8.5%) are posted in 12 THQ hospitals. (Table 8)

Table 8. Health Facilities-wise Distribution of MOs, Specialists, Dental Surgeons and Nurses in AJ&K, 2022

Institute Type	Medical Officers		Specialists		Dental Surgeons		Nurses	
	n	%	n	%	n	%	n	%
CMH Hospital	90	12.7	71	22.4	5	6.3	134	19.1
DG Health Office Muzaffarabad	50	7.1	0	0.0	1	1.3	1	0.1
DHO Offices	252	35.6	1	0.3	36	45.6	0	0.0
DHQ Hospitals	184	26.0	158	49.8	17	21.5	385	54.8
Other Govt. Hospitals	66	9.3	36	11.4	9	11.4	110	15.6
THQ Hospitals	55	7.8	51	16.1	11	13.9	60	8.5
Training School/Colleges	10	1.4	0	0.0	0	0.0	13	1.8
Total	707	100.0	317	100.0	79	100.0	703	100.0

Source: Health Department AJ&K, 2022
Abbreviations: CMH, Combined Military Hospital; DG, Director General; DHO, District Health Officer; THQ, Tehsil Headquarter Hospital

Health Department has a considerable number (3,054) of Paramedics, and the highest 54.2% of them are posted in various DHO offices of AJ&K. very few, 16.5%, are working in DHQ hospitals. The Other Support Staff in the health sector of AJ&K is more than 60% of overall employees (including all other cadres). Of most of this support staff, 67.7% are posted in DHO offices, whereas 12.6% work in DHQ hospitals (Table 9).

Table 9. Institution-wise Distribution of Paramedics, Admins and Other Support Staff in AJ&K, 2022

Institute Type	Paramedics		Admin		Other Support Staff	
	n	%	n	%	n	%
Blood Transfusion Center	6	0.2	1	1.6	8	0.1
CMH Hospital	292	9.6	4	6.3	540	6.6
DG Health Office Muzaffarabad	5	0.2	8	12.5	158	1.9
DHO Offices	1,655	54.2	11	17.2	5,528	67.7
DHQ Hospitals	505	16.5	13	20.3	1,026	12.6
Drug Testing Laboratory	3	0.1	0	0.0	15	0.2
Program Manager EPI	10	0.3	1	1.6	45	0.6
Hospital	161	5.3	6	9.4	328	4.0
Malaria Control Office	208	6.8	6	9.4	102	1.2
THQ Hospitals	199	6.5	12	18.8	317	3.9
Training School/Colleges	10	0.3	2	3.1	102	1.2
Total	3,054	100.0	64	100.0	8,169	100.0

Source: Health Department AJ&K, 2022
Abbreviations: CMH, Combined Military Hospital; DG, Director General; DHO, District Health Officer; DHQ, District Headquarter Hospital, THQ, Tehsil Headquarter Hospital; EPI, Expanded Program for Immunization,

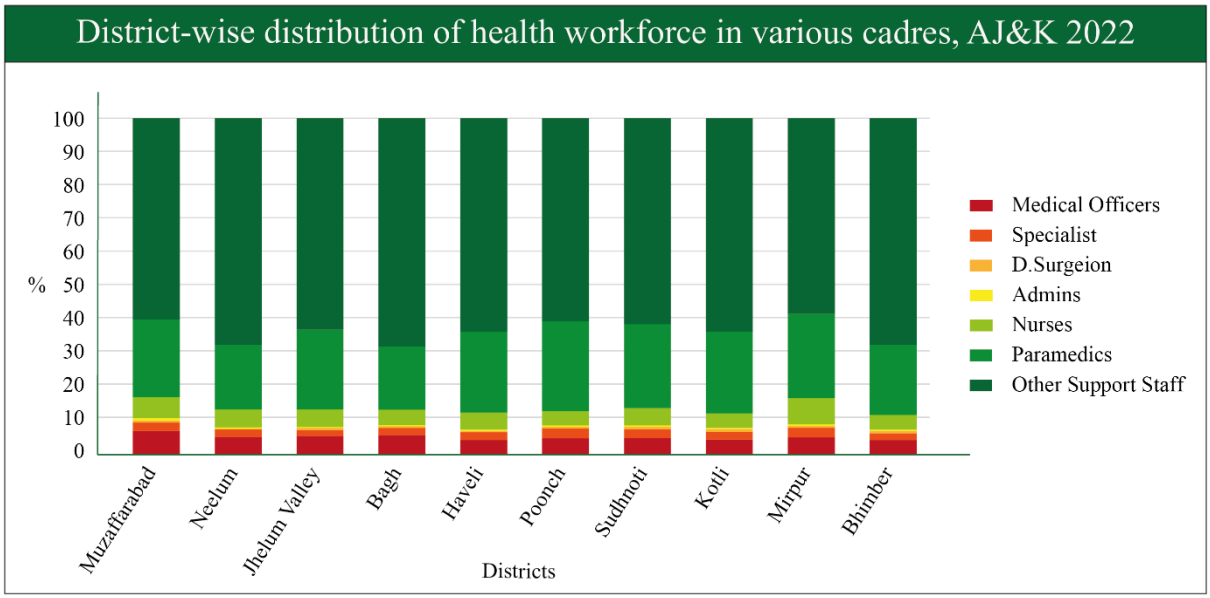

Figure 10. District-wise distribution of health workforce in various cadres, AJ&K 2022

2.16 Health Information System

A reliable information system is considered the backbone of any health system because it provides the required information to analyze gaps between health needs and health service provision. It helps the leadership and governance at different levels to analyze the effectiveness and efficiency of the existing service delivery apparatus. The District Health Management Information System was developed in 2006 with support from the Japan International Cooperation Agency. However, in AJ&K, the implementation could not reach the desired levels. The health information system in AJ&K is fragmented. Basic Health Units, Rural Health Centres, District Headquarters Hospitals, and Tertiary care hospitals register births and deaths and maintain their records at the Health Facilities. However, these records only contain aggregated numbers of births and deaths. None of the births or deaths records contains sufficient data to trace or link these births and deaths records to the Local Government offices or national ID management authorities.

At primary level healthcare facilities (BHUs and RHCs), as per standard operating procedures, Lady Health Visitor registers pregnant women in the Mother Health Register. However, there is no mechanism to capture the CNIC of the women that can be used for the registration of outcomes of pregnancy with the local government department. The data in the mother register is kept only at the health facility level as no mechanism exists to flow this data to higher levels, including District Health Offices or Health Directorate at the State level. No data sharing protocols exist for sharing information with the Local Government Department. Standardization of birth and death certificates is required for uniformity purposes in all the health care facilities of AJ&K.

2.17 The Need for Health Policy

Due to rapidly changing socio-cultural, environmental, and global dynamics, the Azad State of Jammu and Kashmir requires an updated and inclusive health policy to address the challenges of promoting health and quality of life for its people. The inter-district inequities in service provision are primarily due to poorly managed health infrastructure, lack of equipment, medicines, adequate and trained staff, and essential supplies in most health facilities.

The gap in intervention coverage remains primarily due to inequities in access to quality services. Female health care providers, specifically WMOs and gynaecologists, are reluctant to work in hard-to-

reach areas. The secondary health care services in remote areas are not sufficient for the need of the population. The inadequate referral system burdens DHQs and teaching hospitals, which require a further referral and lack fully equipped ambulances. Lack of specialized care resulted in patients' referrals outside A&JK and high out-of-pocket expenditure.

Although the Government of Azad Jammu and Kashmir has prioritized health in its development agenda, the lack of an inclusive and comprehensive health policy in Azad State of Jammu and Kashmir is limited the delivery of quality healthcare to its people. The recent Covid-19 pandemic has exposed the lacunas in Azad Jammu and Kashmir's health system, ranging from a shortage of health workforce to insufficient health care facilities and medical teaching institutes. It is imperative to formulate a comprehensive health policy addressing all dimensions of health for effective and sustained health outcomes.

Chapter 3

Guiding Principles For The Formulation of AJ&K Health Policy

3.1 Pakistan National Health Vision

In the wake of the 18th constitutional amendment, which resulted in substantial constitutional reforms, health was devolved to the provinces. To provide an overarching national vision, the Ministry of National Health Services Regulations and Reforms launched the National Health Vision in 2017 (MoNHSRC, 2016). The vision intends to provide a unified approach to tackling health issues, coherence between federal and provincial efforts, synchronization with international treaties, and a basis for implementing SDGs. The National Health Vision was developed around the eight thematic areas: health governance, health financing, packaging health services, human resources for health, health information system and research, essential medicines and technology, cross-sectoral linkages, and global health responsibilities. Efforts were made to align the health policy of AJ&K with the National Health Vision.

The vision stated:

"To improve the Health of all Pakistanis, particularly women and children, by 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."

National Health Vision may be described as the broader contours of the health policy objectives of the provinces and federating units. On the other hand, the achievement of health-related SDGs is not only a fulfilment of international commitments but instead practical steps for laying the foundations of a well-articulated health policy. In this context, AJ&K needs to orient the health policy to align with the national health vision and pursue the achievement of SDGs as the intrinsic part of health policy.

3.2 Frameworks for AJ&K Health Policy

A framework for health policy was adapted using guidance from the WHO framework for national health policies, strategies, and the National Health Vision 2016–25 (World Health Organization, 2010). An inclusive policy formulation process was adapted to draft the health policy for AJ&K. Thematic areas and guiding principles were adapted to develop the health policy that will guide the strategies likely to achieve health-related SDGs in AJ&K (Figure 11).

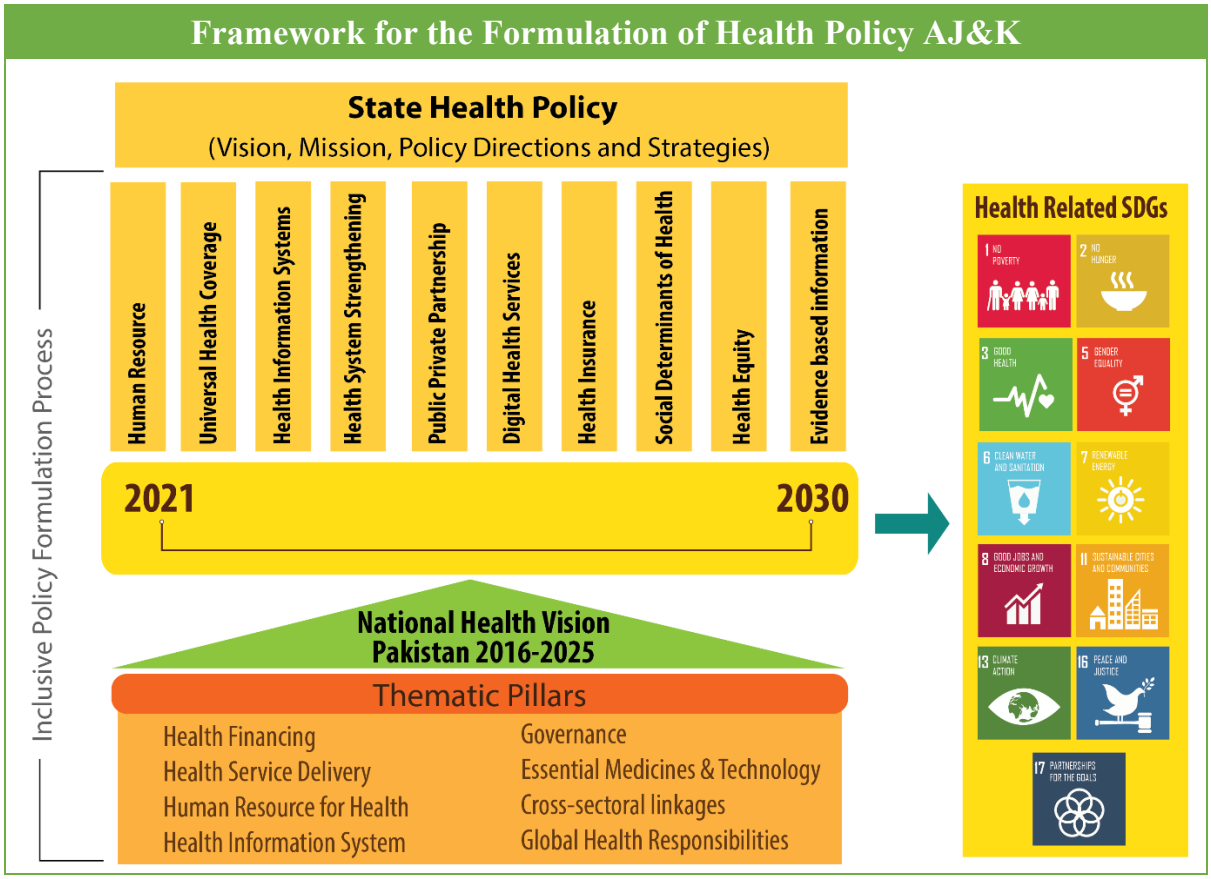

Figure 11. Framework for the Formulation of Health Policy AJ&K

The following methodological consideration was adapted to formulate a technically robust health policy and explicitly cover all the significant areas.

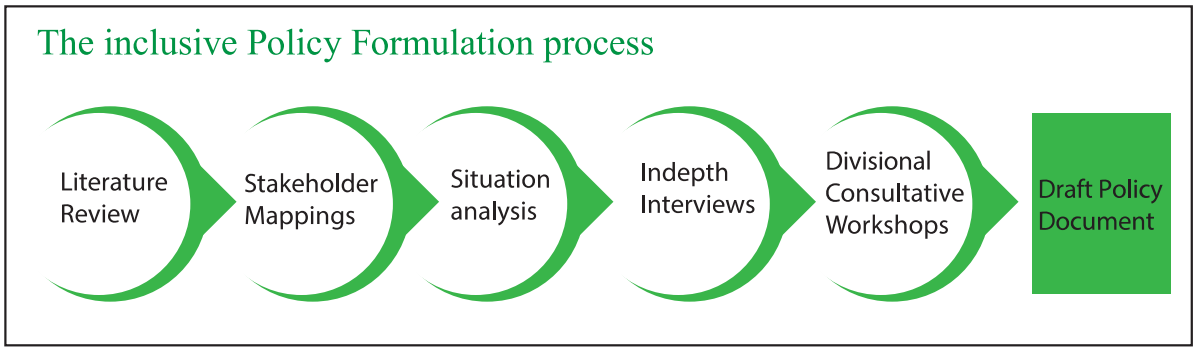

Figure 12. Process of AJ&K Health Policy Formulation, 2022

3.3 Sustainable Development Goals

In 2015, UN member states adopted 17 Sustainable Development Goals (SDGs), 167 targets, and 232 indicators to be achieved by 2030 (United Nations, 2017). SDG 3 envisages "ensuring healthy lives and well-being of all ages." On the other hand, the other 16 SDGs are also related to health in one way or the other. Participation of the Government of AJ&K in Voluntary National Reviews of SDGs is cognizant that policymakers in AJ&K understand the importance of achieving SDGs targets necessary for overall progress in AJ&K.

3.4 Quality of Care Standards

Quality of care has become one of the cardinal concepts in health care and enshrines the pursuance of efficiency, patient-centeredness, and accessibility goals. According to WHO, six quality dimensions must be considered to improve health systems, including effectiveness, delivering health care that is adherent to an evidence-based, results in improved health outcomes for individuals and communities, based on need, efficient (delivering health care in a manner that maximizes resource use and avoids waste), accessible (delivering health care that is timely, geographically reasonable, and provided in a setting where skills and resources are appropriate for medical need), patient-centred (delivering health care that takes into account the preferences and aspirations of individual service users and the cultures of their communities), equitable (delivering health care that does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socio-economic status), Safe (delivering health care that minimizes risks and harm to service users). These principles or improving quality of care were considered to formulate AJ&K health policy.

3.5 Human Right-Based Approach

Realizing the human potential, preserving human dignity, attaining the individual and collective human potential, and fulfilling social, economic, and moral obligations are perhaps no more dependent upon any other natural endowment than health. The right to health is a set of internationally agreed human rights standards. This means achieving the right to health is central to, and dependent upon, the realization of other human rights, including food, housing, work, education, information, and participation (Organization, 2017). According to WHO, a rights-based approach to health requires that health policy and programmes prioritize the needs of those furthest behind first towards more significant equity. This principle has been echoed in the recently adopted 2030 Agenda for Sustainable Development and Universal Health Coverage. The right to health must be enjoyed without discrimination based on race, age, ethnicity, or status. Non-discrimination and equality require states to take steps to redress any discriminatory law, practice, or policy. Therefore, health must be considered a human right, and health policy should invariably be sensitive to this approach. Special consideration may be given to vulnerable populations, including Persons with Disabilities (PWDs), Old-age citizens, transgender persons and drug addicts.

3.6 Technical and Allocative Efficiency

The funds can be generated from income and wage-based taxes, broader-based value-added taxes or excise taxes on tobacco and insurance premiums. The source matters less than the policies developed to administer prepayment systems. The issues related to fiscal sustainability, including decisions on risk pooling, are required to ensure the suitability of the healthcare delivery system.

The proportion of the poor population to contribute via income taxes or insurance premiums requires free and quality health services from pooled funds and general government revenues. Countries whose entire populations have access to a set of services usually have relatively high levels of pooled funds – in the order of 5–6% of gross domestic product (GDP). In the case of AJ&K, considering the fiscal dependence on the federation and limited fiscal bases, contributions from the public to make available a complete range of healthcare services are necessary to ensure fiscal sustainability. Otherwise, the rich and healthy will opt out, and there will be insufficient funding to cover the needs of the poor and sick. While voluntary insurance schemes can raise some funds without widespread prepayment and pooling and help familiarize people with the benefits of insurance, they have a limited ability to cover a range of services for those very poor to pay premiuMs Longer-term plans for expanding prepayment and incorporating community and micro-insurance into the broader pool are essential.

Health was devolved after the 18th Constitutional Amendment. The Government of AJ&K, like other administrative units of Pakistan, has received greater autonomy in managing its health care system. This has presented an opportunity to the Department of Health AJ&K to reform the health system and devise a common, integrated and sustainable framework for streamlining and synergizing the efforts of all the health system's stakeholders.

Azad Jammu and Kashmir's first health policy was developed in 1996 with the prime goal of achieving health for all by 2000. The projected population of AJ&K for the year 2021 is about 4.32 million as driven by the population of 4.045 and its growth rate of 1.64 from the population census 2017, and this population is unevenly distributed in the ten districts of AJ&K. The earthquake of 2005 inflicted much damage on AJ&K's health infrastructure. Although the international donor agencies, NGOs, and development partners have supported the reconstruction and rehabilitation of facilities and programs, the recovery of health infrastructure in AJ&K is still a challenge, particularly in achieving the targets of sustainable development goals localized in the context of AJ&K.

The weak health system building blocks such as human resources, information systems, and regulations result in a poor healthcare delivery system, further affected by peculiar geopolitical reasons and geographical inaccessibility. Over the last two decades, the government of AJ&K has initiated many programs to improve the quality of life and the health system.

3.7 Universal Health Coverage

Globally, over 930 million families spend at least 10% of their household income annually on health care (World Health Organization, 2022). The countries must increase spending on primary health care by at least 1% of their GDP to meet the health targets agreed upon under the SDGs. It is essential to develop a pragmatic plan for integrating Universal Health Coverage (UHC) into the health policy of GoAJ&K. The plan should not set ambitious and unrealistic goals but be predicated on global and national research evidence while considering the local and national limitations, the needs of the people, availability of the healthcare workforce and priorities of the key stakeholders.

To achieve UHC, Azad Jammu & Kashmir requires a robust people-centred primary healthcare system. Although there are national "Sehat Sahulat Programs" specifically designed to achieve Universal Health Coverage, Azad Jammu and Kashmir lack health facilities that can provide standard health services to the people living in far-flung areas. To increase Universal Health Coverage in Azad Jammu and Kashmir, an increase in the number of primary healthcare centres may be required over time. The Lady health workers programme can play a vital role in strengthening community primary healthcare services. The programme coverage in AJ&K is only 69%, which may be increased to 100% for effective primary health care services delivery. A proper referral system may be devised for the effective functioning of the health system. The scaling up of community nutrition programs should be at the village level to effectively curb the issue of stunting and wasting prevalent in the state of Azad Jammu and Kashmir. The catastrophic expenditure on health in AJ&K is about 4.47% (taking extrapolation for AJ&K). In order to lower the Out-of-Pocket expenditure on health, the Essential Primary Health Services may be implemented in all districts of AJ&K with clear monitoring standards, along with Disease Control Priorities 3 recommended and prioritized 151 interventions. The following principles may be taken into consideration:

i. Access to essential health services, including prevention, promotion, treatment, rehabilitation, and palliation
ii. It helps to define health priorities and directs health resources
iii. Evidence-based priority setting

iv. The burden of diseases and consequent implication in the losses through Disability Adjusted Life Years[1]
v. Budget impact of interventions and financing arrangements
vi. Embedding the system for Monitoring and Evaluation of the programs and intervention
vii. Periodic review is carried out

In order to choose a set of interventions for UHC in AJ&K, the general guidelines may be considered to prioritize the intervention.

i. Effectiveness of the intervention on the health of individuals and population in the area under intervention
ii. The burden of diseases and the losses sustained
iii. The feasibility of the intervention is measured in terms of how much it is in sync with the existing paraphernalia instead of being disruptive
iv. Cost-effectiveness of the intervention that whether the intervention gives the value-for-money
v. The socially and economically excluded population benefits from the intervention

3.7.1 Essential Package of Health Services

In order to develop an Essential Package of Health Services for all people in AJ&K, it must be determined which services are to be covered by different tiers of health paraphernalia, i.e., at the Primary healthcare (Primary Health Care) level, first-level hospitals, tertiary level hospitals, and population level. Health Department AJ&K, in a study on Essential Package of Health Services, has categorized community, Primary Health Care, and first-level hospitals as District Essential Package of Health Services interventions. In contrast, interventions at a tertiary hospital, population level, and sectoral programs have been categorized as those managed at the state level (Health Department GoAJK, 2021).

WHO has defined UHC as "ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quantity to be effective, while also ensuring that the use of these services does not expose the user to financial hardship." The main concepts of UHC include a) population coverage, b) range of health services provided, and c) out-of-pocket expenditure. In striving for this goal, governments face three fundamental challenges how such a health system is to be financed, how they can protect people from the financial consequences of ill-health and paying for health services, and how they can encourage the optimum use of available resources. Against the backdrop of the global vision of health for all, a well-entrenched policy guideline adopted by the countries has been the Universal Health Coverage policy so that the people who are otherwise excluded from health coverage for one reason or the other come into the fold.

3.8 Patient-Centred Quality of Care

The Institute of Medicine defines patient-centred care as “Providing care that is respectful of, and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions.” The standard parameters for the orientation of the patient-centred care plans are:

- The health system’s mission, vision, values, leadership, and quality-improvement drivers are aligned with patient-centred goals

[1] DALY represents the loss of the equivalent of one year of full health. DALYs for a disease or health condition are the sum of the years of life lost to due to premature mortality (YLLs) and the years lived with a disability (YLDs) due to prevalent cases of the disease or health condition in a population. (WHO - https://www.who.int/data/gho/indicator-metadata-registry/imr-details/158)

- Care is collaborative, coordinated, and accessible. The right care is provided at the right time and place
- Care focuses on physical comfort as well as emotional well-being
- Patient and family preferences, values, cultural traditions, and socioeconomic conditions are respected
- Patients and their families are an expected part of the care team and play a role in decisions at the patient and system level
- The presence of family members in the care setting is encouraged and facilitated
- Information is shared fully and in a timely manner so that patients and their family members can make informed decisions

Several studies have demonstrated that by practising patient-centred care, facilities experience improvement in patients' health status, quality of care, and increased efficiency of care. A patient-centred approach may be of utmost importance in preparing the Health Policy for AJ&K, which has its own administrative, geopolitical, and social peculiarities.

3.9 Data for Action

Reliable and timely data on births and deaths are required to design and implement health interventions, monitor progress, and evaluate health programs at national and sub-national levels. In Pakistan, including Azad Jammu and Kashmir, existing vital civil registration and health information systems do not provide reliable and timely data on health outcomes, including mortality and morbidity. DHS tends to underestimate maternal deaths due to the use of pregnancy-related deaths reported by family members instead of maternal deaths. For instance, the Maternal mortality of AJ&K, as reported by the Pakistan Maternal Mortality Survey 2017-2018, is 104 per 100,000 live births. The 95% Confidence Interval for this ratio is from 23 per 100,000 live births to 185 per 100,000 live births, indicating that the maternal mortality ratio can be between these limits. Moreover, such a DHS does not report district-level mortality data, which is needed to target the areas where resources are most needed. This is particularly important for places like AJ&K with limited resources.

Death registration data, with accurate information on the cause of death and cause of death coded using the International Classification of Diseases (ICD), are the preferred source for monitoring mortality by cause, age, and sex. Data on cause-specific mortality is required to monitor the desired improvements in the population's health, and programs are evaluated to ensure the targets are met (AbouZahr et al., 2015). For monitoring SDGs indicators, the registration of deaths along with the causes by civil authorities needs to be improved.

3.10 The Health Policy for AJ&K: The Issues at Hand

Though the socio-economic indicators present a relatively good picture for AJ&K, the policymakers have to negotiate the challenging health outcomes in AJ&K. The inter-district service provision inequities are evident due to poorly managed health infrastructure, lack of equipment, medicines, and inadequate and untrained staff in most health facilities. The infrastructure components are also deficient at a few health facilities. The problem is even further exacerbated by the geographical spread of the population over difficult and inaccessible terrain. The gap in intervention coverage remains primarily due to inequities in access to quality services between geographical areas (rural-urban) and across socioeconomic status. Female health care providers' reluctance, especially WMOs and gynaecologists, to work in hard-to-reach areas limits the coverage. AJ&K faces a double burden of communicable and non-communicable diseases and nutritional deficiencies as in other regions. With these inequalities and challenges, it is pertinent to formulate an updated heath policy for the people of Azad Jammu and Kashmir.

Chapter 4

Health Policy Recommendations

4.1 Proposed Vision

"To achieve complete physical and mental well-being for the people of AJ&K by 2030 through the employment of international best practices that ensure easy, sustainable, and affordable access to health service for all."

4.2 Governance Framework

The governance framework of the health sector in AJ&K needs to be revisited. Although the Department of Health provides the overall leadership, there is the absence of a stewardship role being performed by any overseeing body to provide guidance and leadership to the multiple stakeholders in the health sector. The regulatory mechanisms are almost nonexistent, while there is a concentration of financial and administrative authority. Ultimately, accountability and transparency in the health sector cannot be ensured at the grassroots levels. Stewardship focuses on how government actors take responsibility for the health system and the population's well-being, fulfil health system functions, assure equity, and coordinate interaction with government and society (Brinkerhoff et al., 2019). In order to achieve this governance paradigm shift, decentralization of administrative and financial authority is proposed at the divisional levels.

4.2.1 Decentralized Governance

Decentralization has been an effective strategy for improving primary healthcare systems in Low-Middle-Income-Countries. Three main categories of stakeholders who interact with each other determine the health system and its governance, including the State (government organizations and agencies), the health service providers (different public and private and not-for-profit clinical, para-medical and non-clinical health services providers, unions and other professional associations) and the citizen (population representatives, citizens associations). The interaction between stakeholders needs to be improved for a better quality of care and healthcare delivery systems. The State Health Directorate should provide the stewardship role while there should be the delegation of authority whereby three Divisional Directorates may be created, one each at Muzaffarabad, Mirpur, and Rawalakot. This delegation will strengthen the supervisory capacity of the Health Department and will ensure accountability at lower levels. In order to attain this governance paradigm shift, the following governance structure is proposed in Figure 12.

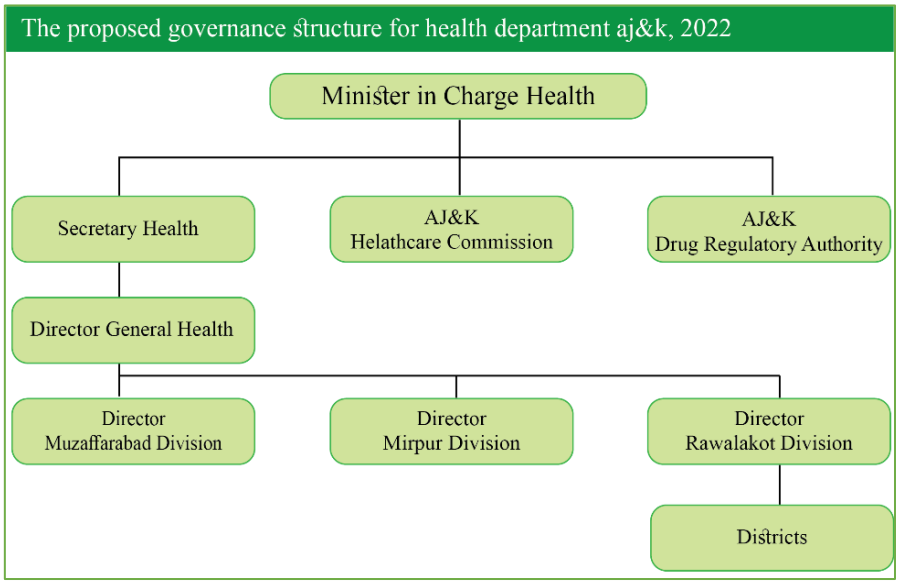

Figure 13. Proposed governance structure for Health Department AJ&K 2022

4.2.2 Blood Transfusion and Drug Control Authority

Blood Transfusion Authority and Drug Control Authority should be strengthened under the Directorate General Health level rather than Minister Health.

4.3 Regulatory Bodies

The regulation of the health sector is a complex enterprise. The health sector in AJ&K does not have a regulatory mechanism to regulate the health sector and provide guidelines, including addressing the quality-of-care issues. In this regard, the following bodies are recommended:

4.3.1 Healthcare Commission

AJ&K has been without an independent regulatory body to oversee the medical practice, provide guidelines and ensure the requisite legal and moral standards in healthcare. Therefore, in the absence of a regulatory mechanism, the due standards in the health system of AJ&K are absent, while the patients and service providers cannot look up to any forum for solid leadership in healthcare. The government of AJ&K, therefore, needs to establish an independent AJ&K Healthcare Commission through legislation and enactment of the AJ&K Health Care Commission Act. Healthcare Commission may cover medical, dental and allied health professionals and public and private healthcare facilities. All public and private hospitals must be accredited by the Health Care Commission to provide healthcare services, including enrollment in the state insurance program.

The commission may be headed by a Chief Executive Officer, while an advisory body with the name Healthcare Commission Advisory Board may be created to provide the advisory role. The Healthcare Commission Advisory Board, headed by the AJ&K Minister of Health, with the Chief Executive Officer as Member cum Secretary of Healthcare Commission Advisory Board, may have members from different medical, supervisory, and educational institutes across Pakistan. The proposed Healthcare Commission will give the Minimum Service Delivery Standards in healthcare by considering the general guidelines for quality of care espoused by WHO. Besides, the roles and responsibilities declared for the Punjab Healthcare Commission, established first in the South Asian Association for Regional Cooperation region, may be taken as guiding parameters for AJ&K Healthcare Commission. The health foundation for the welfare of health professionals may be established under the healthcare commission.

4.3.2 Health Professional Council

Medical and Health Professionals Councils AJ&K chapters should be established under the supervision of the federal level council, i.e. PMC, PNC AHPC, Physiotherapy Council and Pharmacy Council. Tib-e-Unani Eastern Medicine Council, as the Homeopathic Council Chapter, is already working in the state.

4.3.3 Drug Regulatory Authority

AJ&K does not have any drug regulatory authority. As such, the pharmaceutical operations, companies, and outlets are without any watchdog to ensure medicinal standardization and quality. Legislation may be carried out, and AJ&K Drug Regulatory Authority may be established. To cater to the needs of pharmacists, similar to the structured posts in Pakistan, an induction of 32 clinical pharmacists at the tehsil level is proposed. The WHO (Organization, 1999) has indicated the responsibilities to be carried out by drug regulatory authorities, which provide the framework for the proposed AJ&K Drug Regulatory Authority and are summarized below:

i. To operate a system of administration and enforcement to ensure that all medicinal products subject to drug regulatory authority control conform to acceptable standards of quality, safety, and efficacy
ii. The promotion and marketing of medicinal products are in accordance with product information as approved
iii. The use of the drug is rational
iv. All personnel, premises, and practices employed to manufacture, store, distribute, sell, supply, and dispense these products comply with requirements to ensure the continued conformity of the products with these standards up to the time of usage/consumption (Organization, 1999).

In addition, procurement and prescription of medicine should be monitored by a drug regulatory authority in AJ&K. Primary, secondary, and tertiary health data of drug users should be made accessible to the proposed drug regulatory authority. The implementation of the drug act and pathology act should be ensured. The government of AJ&K needs to focus on establishing a microbiology department in each district headquarters hospital of AJ&K, equipped with the required staff and equipment to tackle the rapid increase of microbial resistance.

Legislative reforms are needed as the current pharmacy Act. 1967 and the drug Act 1976 are outdated to carry out day-to-day practices. The proposed reforms under the drug regulatory authority in AJ&K include:

1. Separate Directorate of Pharmacy
2. Pharmacy Council
3. Pharmacy license to only pharmacists registered in category A
4. Drug court in every district of AJ&K
5. Drug testing laboratory in each district of AJ&K

Drug Court should be established at Divisional Level because its status is equal to the high court, so it cannot establish at the District level; moreover, the Divisional level will be sufficient to meet the need. Drug Testing Laboratories should also be at the divisional level instead of the District level as per Punjab, and Divisional level Laboratories will be sufficient to meet the need.

4.4 Human Resource Management

The Government of Azad Jammu and Kashmir is facing challenges of human resources shortage due to migration of healthcare professionals (Physicians, Pharmacists, Nurses, and other allied health), inequitable distribution of health workforce in districts, non-competitive salaries in the private and public sector, and imbalance of health workforce. Human resources in Health in Azad Jammu Kashmir can be improved by upholding all health workers' personal, employment, and professional rights, including safe and decent working environments and freedom from discrimination and harassment. Equality of access to leadership positions based on merit and qualifications may be ensured. Human resource management should implement standardised accreditation, accountability, reward, and recognition mechanisms.

Investment in human resources for the health labour market with the current and future needs of the people and health system to address shortages and improve the distribution of quality health workforce to enable maximum improvements in health outcomes and poverty reduction should be aligned. The capacity of district-level institutions for effective and quality pre-service and in-service training and human resources for health leadership should be built. The data collection, processing, and dissemination of information related to human resources for health monitoring and ensuring accountability at different levels should be strengthened.

Human resource management in health systems is a very complex phenomenon. Being essential, a job where the workforce has to provide solace to suffering patients, healthcare professionals are always up against high-pressure, trauma-laden work scenarios. Though robust health care management will ensure that each employee is motivated, disciplined, and committed to performing his/her work, recruitment, retention, and development of a quality workforce need a thorough re-appraisal of the system. Evidence from the literature suggests that a positive work attitude of the workforce in healthcare is associated with good HR policies, which in turn impact patient handling. Following recommendations are proposed for bringing a positive change in work attitude in the health sector of AJ&K:

4.4.1 Performance Evaluation

The competency framework sets out how people in the Public service should work. It puts the values of honesty, integrity, impartiality and objectivity at the heart of everything we do, and it aligns with the three high-level leadership behaviours that every employee needs to model to deliver excellent services: Set Direction, Engage People and Develop Capability, and Deliver Results. Competencies are the skills, knowledge and behaviours that lead to successful performance. The Annual Performance Evaluation Report template of GoAJ&K (for Officers in BPS 17&18) outlines 09 competencies without grouping them into clusters, i.e. Strategic, People and Performance clusters. The competencies highlighted in the template above/proforma are Intelligence, Confidence and willpower, Acceptance of responsibility, Reliability under pressure, Financial responsibility, Relations with superiors, colleagues and subordinates, Behavior with the public, Ability to decide routine matters, Knowledge of relevant laws, rules, regulations, instructions and procedures. For each competency, there should be a description of what it means in practice, and some examples of effective behaviours should also be given. The proforma also lacks Key Performance Indicators on which the officer's performance may be evaluated. The present performance evaluation procedure is a post-evaluation process, and there is no mechanism for setting Professional Development Plans and key performance indicators at the beginning of the year with the consultation of the line manager for performance evaluation. Without setting key performance indicators and milestones, it is impossible to evaluate the performance of employees of the Health Department. There is also no procedure for Mid-term performance evaluation review.

4.4.2 Work-life Balance

Work-life balance is a formidable challenge in the healthcare profession. Healthcare is a demanding profession requiring 100% involvement, but demotivation syndrome is common despite the job being the noblest of the professions. Employee burnout may be carefully watched, especially in stress-laden hospitals and areas, and employees are given proper care and counselling against job burnout. The senior management should always remain sensitized about the issue, and policies may be internalized to minimize burnout.

4.4.3 Regular Training

There is a need to strengthen the training policy for doctors, allied health professionals, nurses, paramedics, supporting staff and community health workers. Training in Basic Life Support, Advanced Cardiac Life Support, and Advanced Trauma Life Support may be mandatory for all doctors and allied professionals.

4.4.4 Service Structure and Promotions

The literature shows that promotions have an immediate and positive effect on employees and trigger job satisfaction. This positive effect on job satisfaction will most likely improve job performance by, for example, increasing organisational citizenship behaviour, reducing absenteeism and improving psychological well-being (Faragher et al., 2013). All Cadres (Doctors, Allied Health Professionals,

Nurses, Paramedics, Community Health Workers, Supporting Staff and Clerical Staff) service structure should be revised for the promotion channel. Similar to other parts of Pakistan, a standardized pay structure may be adapted for the health department. Annual performance appraisal (360-degree level) may integrate part of promotions and allowance. Contractual employees may be allowed to opt for contributory pension schemes managed by the Govt of AJ&K. The recently approved Social Protection Policy for AJ&K (11th August 2022) provides provisions for such a contributory pension mechanism (Government of Azad Jammu and Kashmir, 2022). Legislation may be required to adapt transfer and posting mechanisms to minimize the influence of pollical bodies.

4.4.5 Adequate Staffing

Deficiency in HR severely impacts the overall performance of health professionals, and consequently, weak patient care becomes a reality. According to the World Health Organization, 1.11 doctors per 1,000 population are required to cater to the population's needs in a specific area. AJ&K in 2020 has 0.18 doctors per 1,000 population, and the current induction rate is calculated at a 6.6% per annum increase between 2016 and 2019. To achieve the standard rate of 1.11 doctors per 1,000 population in AJ&K, three possible scenarios are generated (Figure 12) in order to achieve the target in three years (by 2024), six years (by 2027), and ten years (by 2030). Calculations are made using the population growth rate of 1.64 per year as of census 2017. Current increase rate of doctors at 6.6 per three years, and the need of the population at 1.11 doctors per 1000 population. If the desired ratio is achieved in three years, an average of 1050 doctors must be inducted annually by 2024. To achieve the target by 2027, 635 doctors are needed to be inducted annually. Considering the financial constraints, the desired target can be achieved by 2030 by inducting an average of 440 doctors yearly.

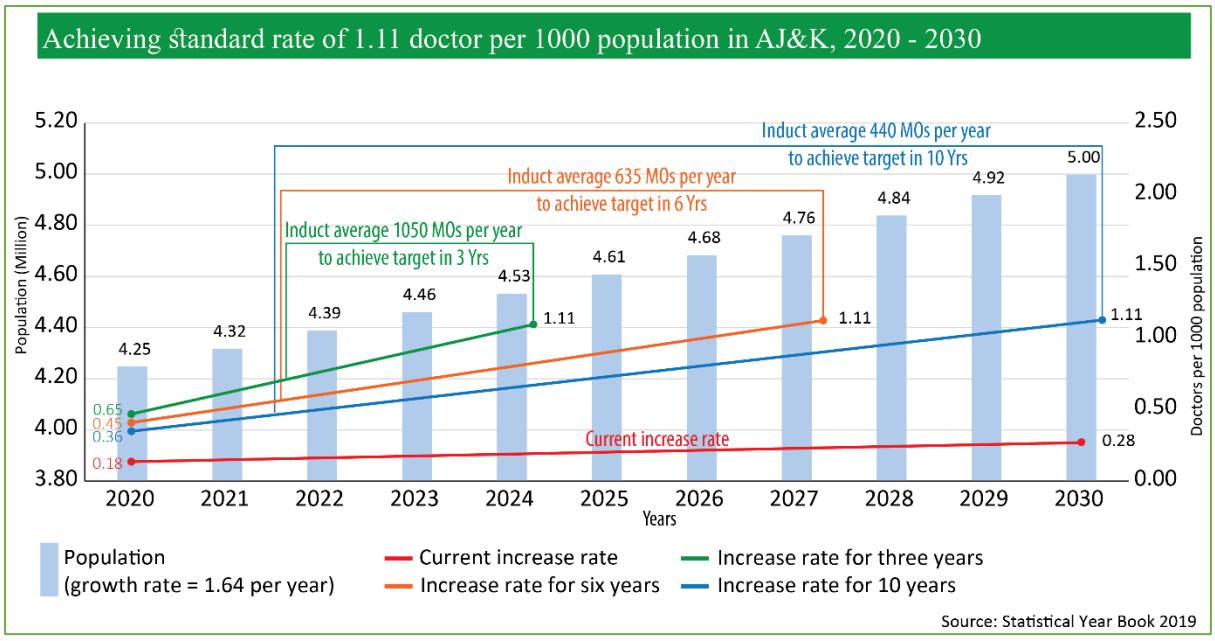

Figure 14. Achieving desired population density of physicians in AJ&K by 2030

In AJ&K, one Dental Surgeon is for the 56,962 population. Figure 15 shows a projected scenario to achieve the target of one dentist per 1,000 population of AJ&K. According to the statistical yearbook of AJ&K current induction rate of dentists is deficient at 1.3 dentists per year. The AJ&K currently has a ratio of 0.02 dentists per 1,000 population. To achieve the standard rate of 1 dentist per 1,000 population in AJ&K, an induction of 415 dentists on an annual basis is required to achieve the target by 2030. Target may be achieved in six years with the induction of an average of 625 dentists by 2027.

The same target can be achieved in three years by inducting 1060 dentists annually by 2024. A similar approach is required to create new vacancies for Specialist Dental Surgeons.

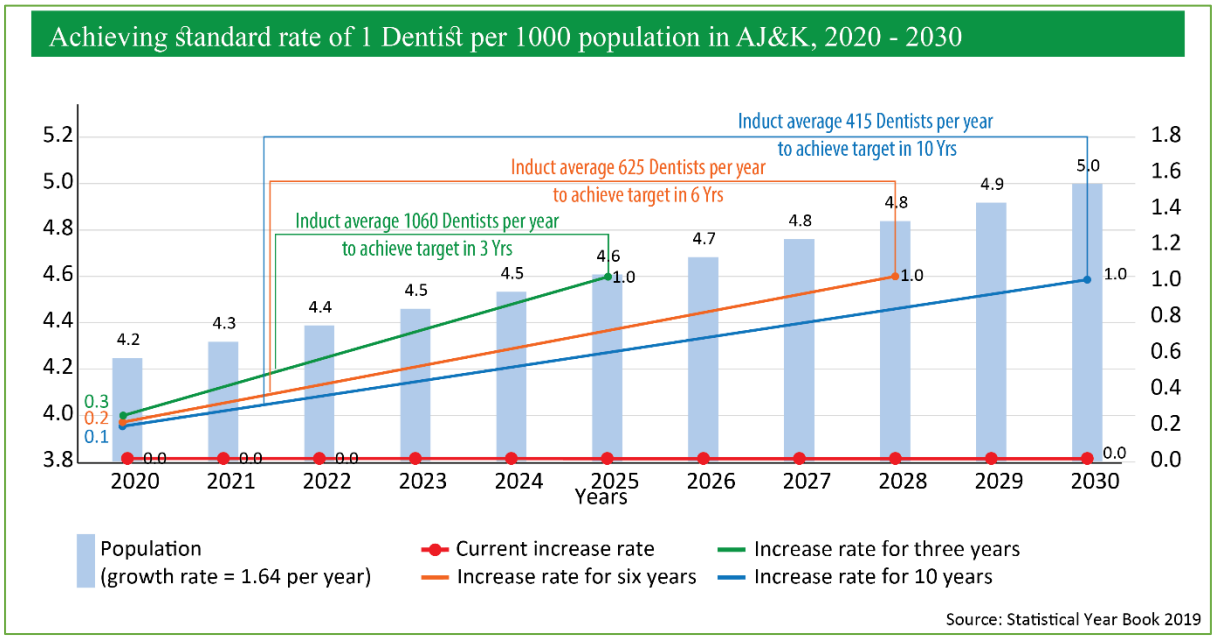

Figure 15. Achieving desired population density of dentists in AJ&K by 2030

Similar projections are made to measure the desired density of nurses per population needs of AJ&K. To achieve the standard ratio of 3.34 Nurses per 1,000 population in AJ&K, an estimated 1345 nurses are required annually to achieve the target by 2030. The targets can be reached in six years with the induction of an average of 1800 nurses by 2027. Furthermore, if resources allow, this target can be completed in three years by inducting 2800 annually by 2024 (Figure 16).

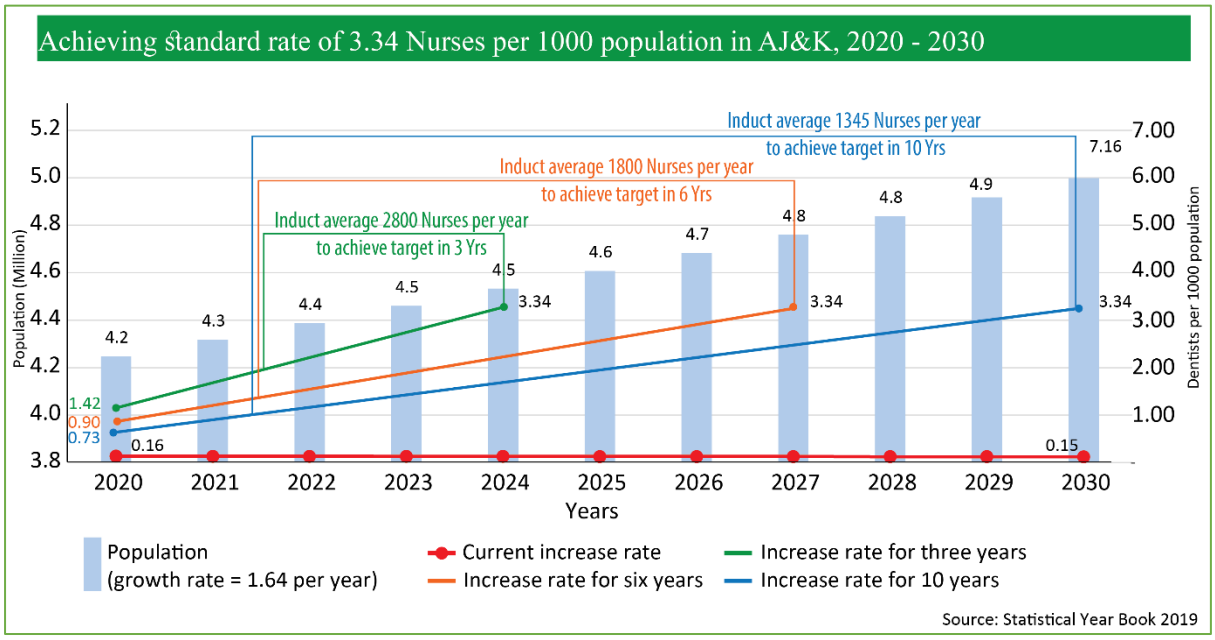

Figure 16. Achieving desired population density of nurses in AJ&K by 2030

4.4.6 Task Shifting and Task Sharing

Task shifting and Task sharing are evidence-based strategies to respond to the shorter of human resources in resource constraint settings. Through this strategy, cadres who do not normally have competencies for specific tasks to deliver them and thereby increase levels of medical care access. Task shifting and task sharing can be used to expand and ensure access to essential health services by optimizing the use of the existing medical care workforce. In AJ&K, the support staff comprised of around 72% of staff provide service in various healthcare facilities of AJ&K. A regulatory environment may be created to implement task sharing and task shifting in AJ&K. Human resource quality assurance mechanisms are required to be adapted for better health services provisions in AJ&K. A systematic accredited approach to standardized competency training based on needs may also be required to implement this approach in AJ&K.

4.5 Establishing a Medical University

To ensure the sustainability of human resources, introduce a culture of evidence-based medicine and research, and meet the growing need for qualified and skilled healthcare professionals, there is a dire need to establish a medical university in the State of Azad Jammu and Kashmir. The existing medical college may get affiliated with the proposed medical university, making these colleges an autonomous body. Introducing allied health and medical education degree programs and clinical courses may be possible through this initiative to fulfil the requirements of medical faculty in AJ&K medical colleges. The programme may include anatomy, physiology, biochemistry, forensics, Pharma, and pathology. Interim solutions include facilitating current doctors to train where training opportunities are available with return guarantee bonds. Regarding the available post-graduate training slots, a **c**entral induction policy may adopt in AJ&K to promote merit-based inductions. Simultaneous efforts are needed to increase the post-graduate training slots.

To improve governance, the proposed Medical University may have three divisional campuses. College of Medical Technology, nursing, physical medicine, rehabilitation and alternative medicine may also be established under the medical university. Given the acute shortage of dentists, a dental college may be established in AJ&K. Supporting Staff along with new vacancies of dental surgeons (one dental technician and one dental Assistant with each dental surgeon vacancy) may also be considered to fulfil the Human Resource needs in the dental sector.

4.6 Reforming Preventive Healthcare

It is established from the global evidence worldwide that preventive healthcare measures enhance the overall prospects of quality of life and reduce the costs associated with curative healthcare management. It is important that disease prevention and early detection may be well embedded in the healthcare management system. Based on WHO guidelines, the following steps are recommended for disease prevention:

4.6.1 Primary Prevention Services

i. Vaccination and post-exposure prophylaxis of children, adults, and the elderly
ii. The education of society via providing information on behavioural and medical health risks. For instance, increased physical activity and change in dietary habits may reduce the risk of hypertension, diabetes, etc.
iii. Measures to reduce risks at the individual and population levels
iv. Inclusion of disease prevention programmes at primary and specialized health care levels, such as access to preventive services (ex. counselling)

v. School health programmes
vi. Provision of nutritional and food supplementation
vii. Dental hygiene education and oral health services

4.6.2 Secondary Prevention Services

i. Introduction of population-based screening programmes for early detection of diseases;
ii. Provision of maternal and child health programmes, including screening and prevention of congenital malformations

4.6.3 Early Detection and Response to Communicable Diseases

Communicable diseases such as TB, malaria, HIV/AIDS, diarrhoea and pneumonia, cholera, influenza, meningitis, and dengue) Communicable disease surveillance, outbreak alert, and response system may be responded to. This system is reliant up to a large extent on primary healthcare. Therefore, a well-functioning system integrated system will ensure that communicable diseases are controlled before a significant outbreak and consequent damages.

4.6.4 Reforming Primary Healthcare

A robust Primary Health Care system is the first bulwark against health challenges associated with healthcare's preventive, curative, and promotional aspects. If the Primary Health Care system is weak and under-resourced, the burden shifted to overall health metrics gets magnified. The Government of AJ&K needs to strengthen Primary Health Care, which will reduce the burden of NCDs, and the burden on secondary and tertiary health facilities and effectively implement the disease control programmes. The evidence that primary care can deliver better health outcomes at a lower cost is strong. People with NCDs or at risk of developing NCDs require long-term care that is proactive, patient-centred, community-based, and sustainable. Such care can be delivered equitably only through health systems based on Primary Health Care

The Health System in AJ&K may consider to include: (i) a person focuses across the lifespan rather than a disease focus (ii) accessibility with no out-of-pocket payments (iii) distribution of resources according to population needs rather than demand (iv) availability of a broad range of services including preventive services and coordination between different levels in the health system. The practice of family health should be encouraged and strengthened in the area. Trust in Primary Health Care, and quality of care endorsed by forming social attitudes may be developed.

4.7 Reducing the Burden of Non-Communicable Diseases

According to the Global Burden of Diseases (GBD), the 2019 data on Pakistan showed a prevalence of about 19.64 % of gynaecological diseases and 17.17 % of chronic liver and associated diseases, chronic kidney diseases, etc., in Pakistan (Institute for Health Metrics and Evaluation, 2021). By projecting based on GBD data, the above data may also be taken as proxy data for AJ&K.

The Government of AJ&K may introduce a health system led by primary care, including: (i) a person focuses across the lifespan rather than a disease focus; (ii) accessibility with no out-of-pocket payments: (iii) distribution of resources according to population needs rather than demand; and (iv) availability of a broad range of services including preventive services and coordination between different levels in the health system.

Azad Jammu and Kashmir will have a projected population of 4.5 million in 2021. The burden of Disease for AJ&K was estimated at around 33,000 per 100,000 population in 2019. In AJ&K, non-communicable diseases (including mental health) are becoming a major development challenge. The

burden of non-communicable diseases was 29.9% (18,869 DALYs lost per 100,000 population) of the total burden of diseases in the year 2000. This has increased to 43.7% (18,385 DALYs lost per 100,000 population) of the total disease burden in 2019. Years lived with disability were five main disease groups primarily driving 6,608.2 NCD-related DALYs rate:

1. Cardiovascular diseases
2. Neoplasms/ Cancers
3. Diabetes and Chronic kidney diseases
4. Chronic Respiratory diseases
5. Mental disorders

According to the Global Burden of Diseases data for 2019, ischemic heart disease is the top cause of death, moving from the second position to the first with an increased rate of 28% in ten years. However, Neonatal disorders decreased to the second position with a -24.8% decrease over the same period. Stroke and COPD remain at the same place but showed an increase of 18.7% and 8.4%, respectively. Breast cancer showed the highest increase rate of 45.9%, jumping into the top ten causes of death in 2019. Diabetes and Chronic kidney disease showed a decrease of -45.5% and -29.8%, respectively, but still jumped up in the rank. (Figure 175). NCDs burden in AJ&K is expected to increase due to rapidly increasing pollution and unhealthy lifestyle. In 2019, 0.74 million cases of chronic Liver Diseases had the highest burden of disease among all NCDs in AJ&K. Mental Disorders and diabetes affected 0.5 million and 0.19 million people, respectively. Ischemic Heart Diseases and strokes also affected many people, with 0.087 million and 0.032 million patients, respectively

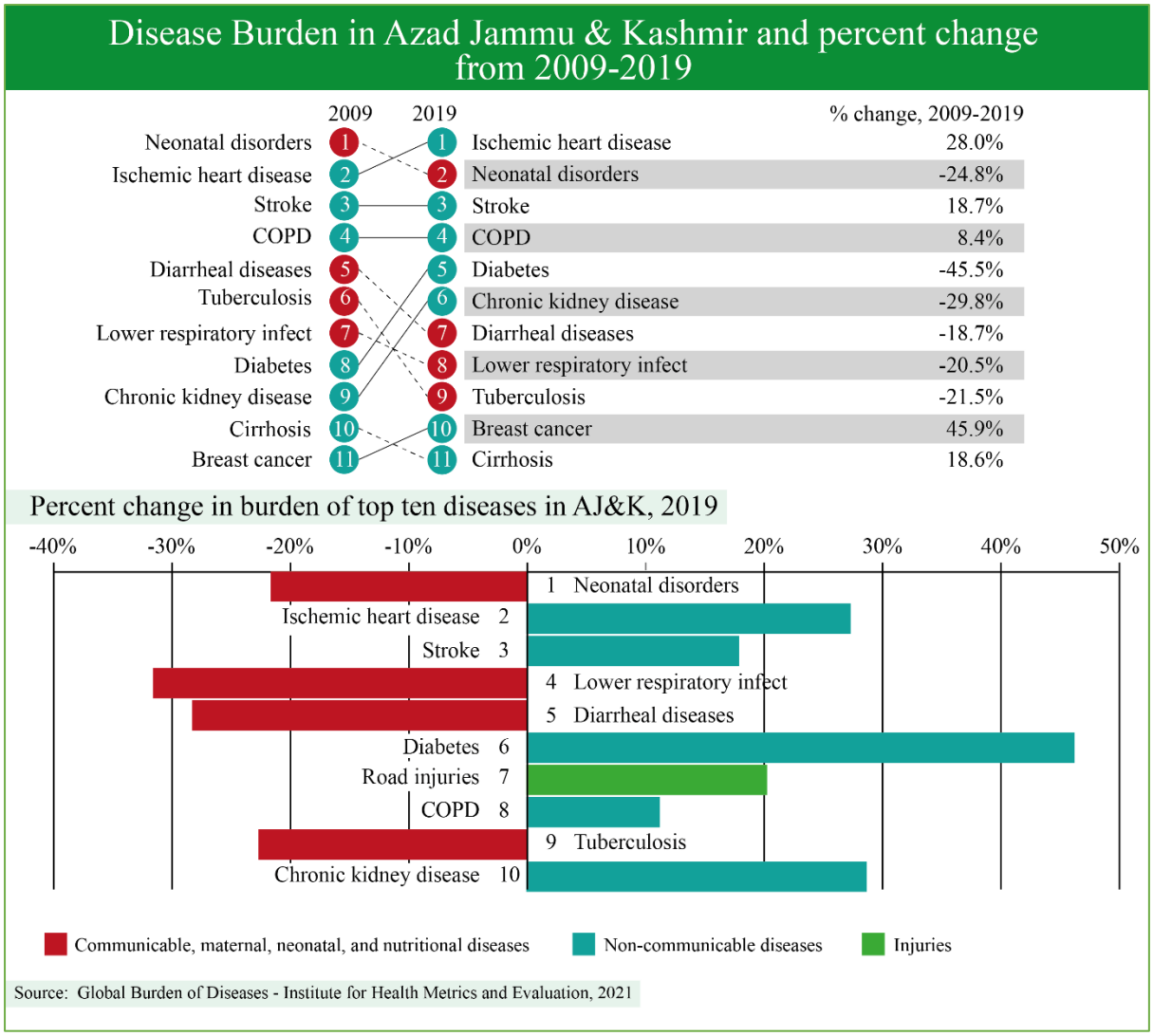

Figure 17. Disease Burden in Azad Jammu & Kashmir and per cent change from 2009-2019

Timely measures such as the inclusion of early screening and preventive measures related to NCDs are required to reduce the burden of NCDs in AJ&K. Early detection and timely management of cases reduce catastrophic health expenditures over time. Investing in community-level prevention programs greatly reduces the overall NCD burden in the community and provides early diagnosis and treatment of NCDs. Reducing complications of NCDs may avert DALYs, which can be translated into monetary terms. Further, an intersectoral approach could decrease the NCDs burden where, for example, outdoor air pollution is attributed to a 25% burden of diabetes mellitus. A decrease in air pollution prevalence decreases the risk of diabetes by a fraction of 25% attributed to diabetes mellites.

4.8 Improving Capacity of Tertiary Level Hospitals

Currently, 90% of complicated cases are referred out of AJ&K despite three medical colleges. There should be three tertiary hospitals with a vision of zero referral outside AJ&K through the establishment of different subspecialty departments

4.9 Financial Sustainability

Health system financing is perhaps the biggest challenge to ensuring health for all. As such, the Government of AJ&K, which has its financial predicaments, is constantly confronted with the sustainability of the health system. The foremost question for the future viability of any health system is its financial sustainability. Literature suggests that to put health financing on the path of sustainability, a mixture of policies may be adopted to ensure that the whole population and all of the services are provided to the patients by the health care system. The Government of AJ&K is spending around Rs 9,838 million on salaries, which makes up 88% of the total health spending (AJ&K Department of Health, 2022). The room for fiscal manoeuvrability is meagre. The revenue base may still be enhanced while revenue collection efficiency may be improved by efficient utilization and targeted interventions.

Health financing reforms may be introduced to mobilize revenues, organize risk pools, and make service payments. The proposed reforms are intended to ensure that each district's specific individual and collective healthcare needs can be more effectively met. Health service delivery involves investments in a wide range of inputs, such as drugs, medical supplies, technology, and infrastructure, and most critically, the health workers who play a central role in delivering services and mediating all aspects of health care. The following guidelines may be used to rejuvenate the health financing in AJ&K:

4.9.1 Efficiency of Revenue Collection

The revenue collection at the government hospitals needs to be improved, and loopholes plugged in. Further, the overall reforms in revenue collection will enhance the budgetary arrangements of the State government to allocate more revenue to the health sector. The institutional-based practice may be introduced (optional), ensuring equity in service provision and not comprising quality of care.

4.9.2 Reprioritize Government Budgets

The spending on the health needs to be prioritized to maximize the gains. Over the next nine years, the allocations in the health budget may be increased on an incremental basis, while within the health sector, allocations for Primary Health Care may increase.

4.9.3 Innovative Financing

In order to raise the revenue base for health spending, new taxation may be considered. In this regard, the Government of AJ&K may levy excise taxes on beverages, carbonated drinks, tobacco, and the use of diaspora bonds for the AJ&K nationals residing abroad.

4.9.4 Development Assistance for Health

Since AJ&K has a special political status while it has over-dependence upon funding from the Government of Pakistan, the case for international development assistance may be vigorously pursued by international financial assistance to carry forward the agenda of health for all.

4.9.5 Purchasing of Services

The purchasing of services means making payments to the health service providers. The Government has launched the Sehat Sahulat programme, an example of the government's indigenous arrangement to purchase services. The programme provides free-of-cost emergency and maternity services, surgical procedures, hospitalization, free consultation and follow-up, transportation coverage, and the case of death burial support. However, the issues related to rates may be addressed to make the project sustainable and avoid misallocating resources. The changes in healthcare spending, particularly in the balance between public and private, inpatient cost-sharing, and other out-of-pocket payments.

Accredited private healthcare providers deliver a sizable share of healthcare services in AJ&K, which means that part of the public expenditure is used to pay *private* providers for the services available to the residents of Azad Jammu and Kashmir.

The reform processes gradually increased user charges for healthcare services. A gradual cost-sharing applies to no contributions on preventive services to subsidized payments levied on specialist visits refereed through the Primary Health Care Centre, diagnostic procedures, and laboratory tests. Specific exemptions from cost-sharing for the services provided for severe illnesses and chronic conditions—further cost-sharing for inappropriate use of emergency services that do not result in hospital admission. Public funding should guarantee only the Essential Levels of Care. The health services not included in the ELC package should be covered through private insurance funds and individual healthcare insurance, which consists of introducing pubic voluntary health insurance policies. According to the most recent available data, an estimated 23.5% of out-of-pocket payments in AJ&K is high compared to Pakistan. The higher direct out-of-pocket payments above 20% of total health expenditure, the households coping with illness may face financial catastrophe and is at increased risk of impoverishment.

4.10 Digital Health

Digital Health, or digital healthcare, has been defined as a broad, multidisciplinary concept that includes concepts from an intersection between technology and healthcare. It applies to the healthcare field, incorporating software, hardware, and services. Under its umbrella, digital health includes mobile health apps, electronic health records, electronic medical records (EMRs), telehealth, and, as well as personalized medicine. Health Information Technology (HIT) can be a positive enabler in transforming how digital public health is delivered and realized. HIT interventions for digital public health provide the chance to increase the performance of health care services, improve quality, save costs, and successfully involve patients as a partner in managing their Health (Wienert and Zeeb, 2021). Digital public health interventions focus on prevention, health protection, and promotion. In a post-Covid-19 world, 60% of patients are willing to see a doctor via remote visit for a chronic condition, while 90% of physicians now agree that virtual care increases access, communication, and satisfaction. Therefore, investment in digital health needs to be a key priority of any future-focused health policy. This is even more relevant in the case of Pakistan, where the number of smartphones has nearly doubled to 81 million in the last two years and is projected to grow to 170 million in 2025. This means 75% population will have a smartphone in 2025. Therefore, 75% of the population could access health education and basic health care within their homes. The mountainous terrain of AJ&K, lack of adequate transportation facilities, and unavailability of health facilities in far-flung areas require that the concerned authorities may give digital healthcare due consideration. The following parameters may be considered for the promulgation of digital health in AJ&K:

1. Institutionalization of the digital health system in the state health system
2. Making the digital health initiatives an integrated part of the digital health ecosystem
3. Appropriate use of digital technologies by considering:
    a. health promotion and disease prevention, patient safety, ethics, interoperability,
    b. intellectual property, data security (confidentiality, integrity, and availability), privacy, cost-effectiveness,
    c. patient engagement, and affordability.
    d. It is people-centred, trust-based, evidence-based, effective, efficient, sustainable, inclusive, equitable, and contextualized.

An appropriate enabling environment like sufficient resources, infrastructure to support the digital transformation, education, human capacity, financial investment, and internet connectivity is prioritized.

4.11 Integrated Health Information System

A reliable information system is considered the backbone of any health system because it provides the required information to analyze gaps between health needs and health service provision. It helps the leadership and governance at different levels to analyze the effectiveness and efficiency of the existing service delivery apparatus. The health information system in AJ&K is fragmented. Although national health policies emphasize strengthening and integrating existing health information systems, these policies are yet to be translated into action. There should be the digitalization of health records

Basic Health Units (BHUs), Rural Health Centres, District Headquarter Hospitals (DHQs), and Tertiary care hospitals register births and deaths and maintain their records at the Health Facilities. However, these records only contain aggregated numbers of births and deaths. None of the births or deaths records contains sufficient data to trace or link these births and deaths records to the Local Government offices or national ID management authorities.

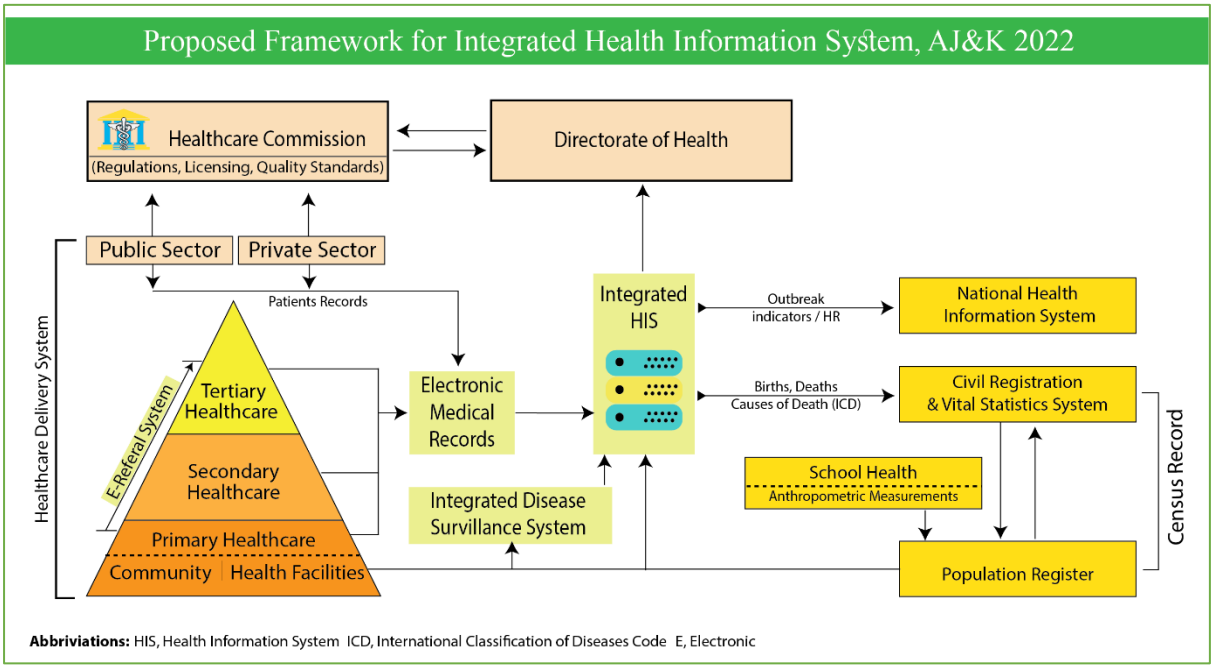

Figure 18. Proposed framework for integrated Health Information System, AJ&K 2022

At primary level healthcare facilities (BHUs and RHCs), as per standard operating procedures, Lady Health Visitor registers pregnant women in the Mother Health Register. However, there is no mechanism to capture the CNIC of the women (Unique ID) that can be used for the registration of outcomes of pregnancy with the local government department. The data in the mother register is kept only at the health facility level as no mechanism exists to flow this data to higher levels, including District Health Offices or Health Directorate at the Provincial level. No data sharing protocols exist for sharing information with the Local Government Department. Standardization of birth and death certificates is required for uniformity purposes in all the health care facilities of AJ&K.

4.12 Data as a Public Good

The data is a valuable resource that should be used to generate public benefits. A significant public investment in the health sector is a key reason why health data are a public good. “Big Data” is rapidly used by many countries to derive economic changes and direct public funding where needed.

4.13 Alternative Medicine

Complementary and Alternative Medicine (CAM) refers broadly to practices and providers that originate ‘outside of mainstream medicine (National Center for Complementary and Integrative Health, 2014). Complementary Medicine refers more specifically to therapies utilized with allopathic health care. Alternative Medicine refers to therapies used in place of allopathic health care. A growing interest in and using complementary and alternative medicine has been well documented. Almost half the population in many industrialized countries now regularly use some form of complementary and alternative medicine, and a significant proportion of the population in developing countries use complementary and alternative medicine (China, 40%, Chile, 71%, 80% in African countries). Regulation of practitioners and guidelines for licensing and establishment of standards of practice and self-regulation have only recently been considered in industrialized countries. Given the socio-cultural status of AJ&K, the policy may consider the introduction of alternative medicine in the state healthcare system. This may require introducing regulatory and legal mechanisms for licensing alternative medicine practitioners, regulating training institutions, and ensuring the safety and ethical use of alternative medicine.

4.14 Precision Public Health and Medicine

The advances in computational tools and the adoption of smartphones, mobile health apps, and wearable devices enable medical practitioners, and decision-makers may guide to offer personalized treatment and multifactorial risk stratification. This advancement in the use of technology supports patients’ engagement and improves their access to health. Recent advances in omics data analysis have created a unique opportunity to study and interpret disease-specific genetic variation and relevant social and environmental exposures, thereby providing personalized treatment and prevention plans to deliver better-targeted care and interventions for specific diseases, individuals and populations.

Precision Medicine is defined as “an innovative approach that takes into account individual differences in people’s genes, environments, and lifestyles” while diagnosing people’s illnesses and making decisions about different treatment options in a timely manner. Unlike the more traditional “one-size-fits-all” approaches and treatments, precision medicine intends to design tailored interventions and treatments considering the differences between different patients and their diseases. Precision medicine can facilitate new drug development and discovery by better understanding the interaction between genomics and drug response and potential treatment options for an individual patient’s disease or condition.

Precision Health and Precision Public Health can be defined as considering all the variations in genes, environment, and lifestyle while providing preventative measures and designing efficient interventions for the individual and population in a timely manner. Precision health aims to address many public health challenges, such as health promotion or health disparities in a population, through interaction between omics and behavioural and environmental data beyond individualized clinical medicine.

4.15 Resilient Health System

Experience of COVID-19 across the world indicates that pandemic preparedness in most countries appears, at best, to have been a paper exercise. Stockpiling essential medical supplies and having reserve health service capacity is undoubtedly costly. Nevertheless, so are the consequences of facing a pandemic unprepared. However, with a much lower cost, health literacy about pandemics in the population can be achieved by supporting having the public "on the side" with necessary societal restrictions.

The threat posed by the deliberate release of biological agents has been increasing during the last few years. The fact is that the intentional dissemination of anthrax spores in the US In 2001, it had a significant psychological impact. It has also shifted the focus from state-sponsored activities (a legacy of the Cold War) to the dystopian, fear-appealing concept of global and sustained terrorist threats. Strengthening surveillance for epidemic-prone diseases brings little benefit to any country which lacks the public health infrastructure necessary for an effective response. Surveillance data, while of great value in providing early warning to other countries of possible international spread Disaster response, including containment of disease outbreaks, begins with a local response based on a viable health system, followed by international support.

Biosafety defines the containment principles, technologies and practices implemented to prevent unintentional exposure to biological agents and toxins or their accidental release. Biosecurity is defined as protection, control and accountability for biological agents and toxins within laboratories to prevent their loss, theft, misuse, diversion of, unauthorized access or intentional unauthorized release. Efforts are needed to develop and implement biosafety and biosecurity measures to minimise the risks posed by natural, accidental and deliberate diseases.

Typically, the backbone of a surveillance system is a list of selected and specific diseases for which reporting to the health authorities is mandatory. This disease reporting approach often requires laboratory confirmation, depending on the microorganisms considered. A surveillance system based on syndromic reporting, allowing the recognition of a notifiable condition using predefined sets of purely clinical criteria (syndromes), is in place in AJ&K. Aiming at better performance in the detection of deliberate outbreaks, the scope of syndromic surveillance may be broadened by including, new indicator data types that are not directly related to clinical conditions seen in single cases. Such new indicator data include the volume of tests requested from laboratories, log sheets from emergency departments and ambulances, the volume of prescriptions for specific drugs, and absenteeism.

4.16 Evaluation System

Periodic assessment should be conducted to improve the overall performance of the health sector in AJ&K. the assessment should include specific, precise and well-articulated criteria that relate to the health system uniquely and broadly. The department may develop standards in specified priority areas and meet these before tackling additional ones. The action plans should be used to move the process forward. The total assessment might be done on a semi-annual or annual basis. The assessment should not be considered a "once-off" activity, and the following Quality Improvement Cycle should be rolling on. The establishment of Independent Monitoring Units as being practised in Khyber Pakhtunkhwa may be adopted to evaluate the health care delivery system n AJ&K

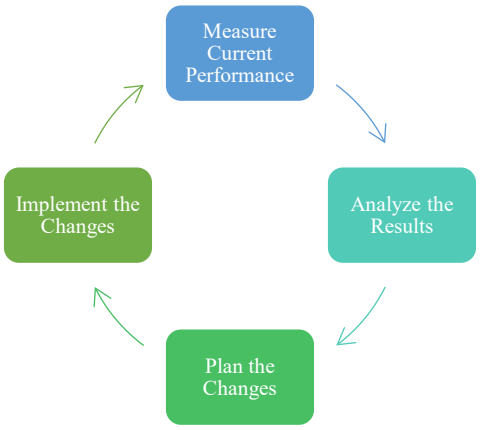

Figure 19. Evaluation Cycle

4.17 Family Planning

Multiple factors influence family planning decision-making within the family, including religious, cultural and social factors. The policy advocates society's use of both traditional and modern contraceptive methods. Efforts are needed to uptake family planning services through improved access to contraceptive information and services. Several studies report a strong association between poverty, family planning, and population growth rates. In consultation with the population welfare department and women's development, Health Departments may develop measures to identify vulnerable families, improve access to services, and support poverty reduction interventions.

4.18 School Health

School-going children are a vulnerable segment of the population by virtue of their physical, mental, emotional and social growth and development during this period. School health services aim to promote, protect and maintain the health of school children and reduce morbidity and mortality in them. Children coming to school have different socio-economic and cultural backgrounds, which affect their health and nutritional status and require help and guidance in promoting, protecting and maintaining their health and nutritional status. The school health services prepare the younger generation to adopt measures to remain healthy. Help the younger generation become healthy and valuable citizens who can effectively perform their role for the welfare of themselves, their families and community at large, and the state as a whole. School Health Services may be initiated in AJ&K in coordination with the primary and secondary education department, parents and the community. The following components of School Health may be considered when developing a school health program.

1) Health Profiling of School Children
2) Periodical Medical Examination (covering nutritional assessment) of school children and teachers
3) Prevention of communicable disease
4) Healthy School Environment
5) Nutritional Service
6) First aid and Emergency care
7) Mental Health
8) Dental Health
9) Eye Health
10) Health education
11) Education of children with disabilities

4.19 Community Nutrition

In community-based programs, workers are often volunteers, and part-time workers interact with households to protect their health and nutrition and to facilitate access to treatment of sickness. Mothers and children are the primary focus. The LHWs program is already carrying out growth monitoring for children. Adolescent girls and pregnant women may be included in the community nutrition support program. For efficient resource utilization and more significant impact, poverty assessment with pregnant women, poor children, and adolescent girls may be applied for a targeted approach and in cash or kind nutrition support. An intersectoral approach may also be required to increase productivity in parts of the food chain.

4.20 Access to All

The architectural design of health care facilities, including the technology and equipment used, affects patient safety and overall service provision. To improve health care and resolve related safety issues, fundamental changes in health care processes, culture, and the physical environment must be aligned so that the caregivers and the resources that support them are set up to enable safe care. The physical environment in which nurses and other caregivers work thus improves both nurse and patient outcomes (Reiling et al., 2008).

The buildings must be designed and constructed while adopting the universal design approach. It should provide access to all people, especially persons with disability, transgenders, and elderly persons. A clear emergency evacuation plan showing assembly points and strategies should be a part of every building, especially hospitals and crowded health facilities that are more vulnerable. An audit plan for the building must be in place, and it is recommended to conduct the audit every three years or earlier if required.

4.21 Community Engagement

Disasters, such as epidemics, pandemics, floods, and earthquakes, pose threats to public health. The damage can become many folds in communities with pre-existing disparities in health, access to services, and environmental risks. Most deaths during or after a disaster occur in the pre-hospital or immediately preceding the patient's arrival at a health facility (pre-hospital). The primary focus of efforts to reduce trauma-related death and morbidity should be on facilities so that early care may be emphasized to attenuate the trauma's impact. Community resilience has been globally recognized as an essential factor in mitigating the impact of such disasters. Community education on necessary preparedness and training to respond to emergencies is crucial in the context of AJ&K. Community-based first aid training programs may be developed, and participation may be made mandatory through legislative measures.

4.22 Medical Tourism

Medical tourism is a global market, with an anticipated growth of more than 30 billion USD by 2025 (Tatum, 2022). People prefer medical tourism over domestic medical services, including advanced medical technology, better essential medical treatment services, ease of access, lower costs, government policies and ease of travel. It has a great potential to contribute to the economic growth and development of the State. Given the fact that tourism destination plays the least significant role in medical tourism, AJ&K is blessed with hill resorts. Efforts are required to improve the quality of health services, equipped with the latest medical technologies, and linking it with tourism may prove beneficial for the economic growth of AJ&K in years to come. The medical tourism in AJ&K may include cardiovascular, reproductive, orthopaedics, dentistry, organ transplantation and health

screenings. Legislation may be required, including ease of visa policies and cover for organ transplant and harvesting.

4.23 Inter-Departmental Coordination

To achieve the health outcomes in A&K, the coordination mechanism between the health department and all other related departments needs to be strengthened and institutionalized. The health department should play the proactive role of stewardship. The health care commission may act as the secretariat of interdepartmental coordination on health. The interdepartmental coordination committee may meet every three months to discuss various issues. The committee should officially brief the Secretary of Health, Minister of Health and Prime Minister of AJ&K every three months on a predefined agenda. In contrast, the committee may pursue the implementation of the recommendation concerning various departments through the Health Care Commission. This institutionalized coordination mechanism may set the ultimate synchronization of various policies with the health policy.

4.24 Family Planning and Health Sector

Family Planning Saves Lives Every day, approximately 830 women die from causes related to pregnancy and childbirth. Nearly 99% of these maternal deaths occur in low-income countries. More than half of the deaths occur in sub-Saharan Africa, while one-third occur in South Asia. In addition, in 2015, 5.9 million children under five died (Starbird et al., 2016).

The global community generally agrees that family planning prevents maternal deaths by:

- Reducing the number of times a woman is exposed to the risks of pregnancy (Cleland et al., 2012).
- Helping women avoid unintended and closely spaced pregnancies—a study in Bangladesh found that very short pregnancy intervals are linked with seven times increased risk of induced abortion (DaVanzo et al., 2007).
- Helping women avoid more than four births, or births after 35 years of age (Stover and Ross, 2010).

The rapid population growth rate (2% annually from 1949 to 1978) caused great difficulties for China's national economy because it increased the burden on families, communities, and the government. It caused employment problems and slowed increases in living standards and educational levels. The best way to control population growth is based on political education and effective economic measures.

The recommendations are: (Lui et al., 1980).

1. coordinate employment, food rationing, salaries, bonuses, health treatment, age and condition of retirement, preschool care and education with family planning programs, maintain the elderly's living standard, and give preference to childless and single-child families;
2. educate people about family planning and incorporate population growth and family planning into political and economics courses in high school and college;
3. incorporate population control into national economic plans;
4. prohibit families with three children and advocate one child per couple; and
5. establish a permanent population committee to plan, develop, and implement population policies and related research

One Health Approach

One Health is an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health

outcomes (WHO, 2021). Emergences of zoonotic diseases, such as Severe Acute Respiratory Syndrome Coronavirus 2, avian influenza, and Ebola virus disease highlighted the need for inter-sectoral collaboration among human, animal and environmental health sectors to aid in better disease prevention and control (Abutarbush et al., 2022). Similarly, antimicrobial resistance is an emerging global public health challenge. Factors including inappropriate use of antimicrobials both in humans and animals, weakly regulated use of pesticides in agricultural practices, inadequate disposal of animal manure, and absence of microbiological diagnostic services are key factors contributing to the development of bacterial resistance in developing countries

A strong inter-sectoral collaboration of Livestock, agriculture, environment, urban planning, city development authorities, academia and health department is required in AJ&K. Efforts are needed to develop a digital geospatial Anti-Microbial Resistance Surveillance system to better respond to these challenges more efficiently. The one health approach may be backup by necessary legislation to create an enabling environment for its implementation in the state.

4.25 Inter-Ministerial Coordination – Horizontal and Vertical linkages

It is not only dependent upon many other pillars of government and society. Similarly, health care is associated with several other stakeholders. Hence a sound, sustainable, inclusive and futuristic health system cannot be confined to hospitals and medical educational institutions only. The other dimensions like environment, an opportunity for the availability of a healthy living style in sustainable neighbourhoods, a robust drug inspection mechanism, a functional road infrastructure etc., are equally important. A strong need is there for a close liaison between the health department and other departments which are related to providing healthy living conditions to the citizens in AJ&K. A careful analysis suggests the following relations between different departments and the Health department:

4.25.1 Environment Preservation

A clean, hygienic and sustainable environment has a direct bearing on the health of citizens. According to WHO, in 2016, 24% of all deaths globally were caused due to the environment. Environmental hazards like air pollution, water and sanitation, increasing heat waves and severe weather events, harmful exposure to chemicals and more are significant threats to human health and wellbeing.2 Such a scenario demands that preventive effects of national and international environmental policies be assessed, given due consideration and aligned with overall efforts to improve the health status of the citizens in AJ&K. In this regard, waste management may also be given due priority. The efforts of the health department to improve the health status of the citizens in AJ&K may become seriously hampered if environmental effects are not addressed.

4.25.2 Urban and Regional Panning

Sustainable living demands that the burden of diseases may be minimized by providing the populace with ample opportunities to have the such infrastructure, which promotes a healthy living style amongst the citizens. Although AJ&K enjoys unparalleled scenic beauty across its length and breadth, the infrastructure may be developed in a way that ordinary citizens, including children, old age people and adults, find the avenue for healthy living nearby. Developing parks, walking tracks, and exercise areas

[2] WHO,https://www.who.int/activities/environmental-health-impacts accessed on 25.07.2022 at 10.26 pm.

may align with overall health policy objectives. Road infrastructure, on the other hand, is directly related to providing medical care to people who need it.

4.26 Disease Surveillance

Surveillance is the ongoing systematic identification, collection, analysis and interpretation of disease occurrence and public health event data to take timely and robust actions. Now, patients, caregivers, managers, and policymakers can expect the adoption of more holistic approaches in medicine and healthcare through more efficient use of not only biomarkers but also social markers, which are measurable indicators of social conditions in which a patient is embedded, in design and delivering therapeutic and preventive interventions.

Strengthening of integrated Disease Surveillance and Response, Maternal and perinatal death surveillance and Response, with the introduction of new programs such as Birth Defects Surveillance, Social media posts surveillance (posts have been used to infer trends related to a wide variety of health applications), Big data surveillance are required to equip AJ&K to meet the growth needs to the health system.

4.27 Legal Apparatus

Actions are required to create legal apparatuses to create an enabling environment for the smooth implementation of policies, programs and interventions. Health-related acts formulated by the federal Governments, such as Public Health Act, need to be adapted by the legislative assembly of Azad Jammu and Kashmir. Laws and acts may be used to strengthen governance at the state level and district level health institutions. The legal instrument may also be used to address risky health behaviours and enforce regulations to promote good health. In this regard, the legal capacity-building for health may be an integrated component of the training program. Such capacity building may be used to enact and effectively implement public health laws. While legal instruments support institutions and healthcare providers to deliver services effectivity and efficiently, protection of the rights of the population and care seekers may be ensured through tort laws (A tort is a civil, noncontractual wrong for which an injured person or group of persons seeks a remedy in the form of monetary damages). Necessary legislation to empower health tourism (organ transplant)

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Annexes

Annexe 1. Technical Working Group for the Formulation of Health Policy AJ&K.

No. S.H/ (1466) 2021
Azad Govt. of the State of Jammu & Kashmir
(Health Secretariat)
"Muzaffarabad"
Dated: 11/11/2021
☎ 921000, 921002

To,

1. The Director General Health.
2. The Principal,
   AJ&K Medical College Muzaffarabad
3. The Principal,
   MBBS Medical College Mirpur.
4. The Principal,
   Poonch Medical College Rawalakot.
5. The Executive Director,
   AIMS.
6. The Chief Health P&D Department AJ&K.
7. The Commandant CMH,
   Muzaffarabad/ Rawalakot.
8. Provincial Program Manager,
   EPI AJ&K.
9. Regional Director,
   MNCH Program AJ&K.
10. Dr. Jasim Anwar UNDP,
    Consultant for health policy AJK.
11. All Districts Health Officer AJ&K.
12. All Medical Superintendent,
    DHQ Hospital AJ&K.
13. Regional Director,
    National Program AJ&K.
14. Director Training/ Focal Person Health Policy,
    Directorate General Health.
15. SDG,s Coordinator,
    P&D Department AJ&K.
16. Representative from School Association (Public/ Private)
17. Representative from Religious Leader.

Subject: MEETING REGARDING TECHNICAL WORKING GROUP FOR FORMULATION OF HEALTH POLICY AJ&K.

I have been directed to refer the subject captioned above and to convey that the Secretary Health has been pleased to convene a meeting of Technical working group for formulation of Health policy on 18th November,2021, at 1000hrs at committee Room Block No 4 Muzaffarabad.

2. It is therefore requested please come up with necessary preparation/ briefing for discussion on the suspect as per scheduled.

Development Section Received NOV 2021

(Muhammad Tariq Awan) 12/11/2021
Section Officer Health
Ph #05822-921017

Copy to the

Annexe 2. List of Participants 1st Divisional Consultative workshop Mirpur

Sr. No	Name	Designation	Department	District
1	Amjad Mahmood	Professor	Medicine	Mirpur
2	Dr Jasim Anwar	Health Policy Consultant	UNDP	Islamabad
3	Prof. Dr Imran	Principal	MBBS College	Mirpur
4	Prof. Shaukat	V.P Admin	MBBS College	Mirpur
5	Prof. Tariq Masood	V.P Academics	MBBS College	Mirpur
6	Dr M. Saleem Khan	HOD Medicine	MBBS College	Kotli
7	Dr Iftikhar Ahmed	Professor	Medicine	Mirpur
8	Dr Ejaz Ahmed	Assistant Professor ENT	MBBS College	Mirpur
9	Dr Shoaib Khan	General Secretary	Medicine	Mirpur
10	Dr Gohar Latif Kalas	President	IDF AJ&K	Mirpur
11	Dr Raja Ali Masood	President IDF Dist. Mirpur		Mirpur
12	Prof. Dr Ashfaq Ali	Professor	Urology	Mirpur
13	Dr Farooq Ahmed Noor	Medical Superintendent	DHQ hosp	Mirpur
14	Raja Abdul Moheed	Assistant Director	SWD	Mirpur
15	Dr Khalid Pervez Khawaja	Medical Officer	Rahma Hospital	Kotli
16	Dr Khalid Qayyum Butt	Additional Director	Livestock Dept	Mirpur
17	Dr Muzzamel Hussain	President YDA	PGR DHQ Mirpur	Mirpur
18	Dr Hunain Bashir	General Secretary YDA		Mirpur
19	Dr Burhan ul Haq Muhammad Saqib	Cardiologist	DHQ Mirpur	Mirpur
20	Muhammed Tariq	President	Non-Government Org.	Mirpur
21	Amir Bashir	President	Qaswa Welfare	Mirpur
22	Dr Naeem uz Zaman	Medical Superintendent	New City Teaching Hosp	Mirpur
23	M. Waseem Khan	Director	Drug Testing Laboratory	Mirpur
24	Dr Shahzad Ch	Medical Superintendent	DHQ Hospital	Bhimber
25	Dr Tahir Mehmood	President	AFBI Mirpur	Mirpur
26	Dr Fida Hussain	District Health Officer	Health Department	Mirpur
27	Atiq ur Rehman	Senior Vice President	NGO KDAF	Bhimber
28	Muhammad Amjad	General Secretary	NGO KDAF	Bhimber
29	Dr M. Nasrullah Khan	Medical Superintendent	DHQ	Kotli
30	Dr Nasir Iqbal Choudhary	Principal	C of MT	Mirpur
31	Dr Shafqat H Shah	District Health Officer	Health Dept	Kotli
32	Dr Saad Ijaz	Lecturer	MBBS College	Mirpur
33	Ms Shaheen Rashid	Superintendent	SWD	Mirpur

Annexe 3. List of Participants 2nd Divisional Consultative workshop Rawalakot

Sr. No.	Name	Designation	Department	District
1	Dr Khalida Ali	District Health Officer	Health	Poonch
2	Dr Nadeem-ur-Rehman	Director Training	Health	Muzaffarabad
3	Yasir Mehmood	Senior Sale Promotion	ACPL/GSK Pakistan	Sudhnuti
4	Dr Tahir Mehmood	District Livestock Officer	Livestock	Poonch
5	Sultan Ali Tahir	District Social Welfare Officer	Social welfare	Bagh
6	Atif Naeem	CEO AJ&KPAP	NGO	Bagh
7	Manshad	Vice-Chairman	J.K.W.A	Poonch
8	Liaqat Hussain	Social Organizer	Medwa Foundation	Poonch
9	M. Khurshid Baig	media Journalist	Al-Aqsa Trust	Poonch
10	Dr Zaheer Iqbal	Additional Director CS &PD	CS & PD	Poonch
11	Sardar Ameq Mujtaba	Deputy Director	Irrigation	Poonch
12	Mumtaz Hassan	SDO	PWD, PHE,	Poonch
13	Dr Jawad Kiyani	District Health Officer	Health	Haveli
14	Muhammad Iqbal	President Muslim Charity	NGO	Bagh
15	Dr Babar Abbas	Deputy Medical Superintendent	Health	Sudhnoti
16	Dr Sardar Manzoor Hussain	District Health Officer	Health	Bagh
17	Dr Wajid Khan	President PMA AJ&K	Health	Poonch
18	Dr Tariq Iqbal	District Health Officer	Health	Sudhnoti
19	M. Iqbal Butt	Social Welfare officer	Social Welfare Department	Poonch
20	Saqib Mehmood	Social Welfare officer	Social Welfare Department	Sudhnoti

Annexe 4. List of Participants 3rd Divisional Consultative workshop Muzaffarabad

Sr. No	Name	Designation	Department	District
1	Dr Shehzad Ahmed Khan	Vice-Chancellor	Health Services Academy	Islamabad
2	Prof. Dr Umer Farooq	Dean & CEO	Ayub Medical College/MTI	Abbottabad
3	Dr Zeeshan Mangi	Assistant Chief	MoPD&SI	Islamabad
4	Brig. Syed Akhtar Hussain Shah SI (M) Retd.	Director General	Kashmir Institute of Management	Muzaffarabad
5	Dr Sardar Aftab Hussain, DG Health AJ&K	Director General	Health	
6	Dr Jasim Anwar	UNDP Consultant	Health Policy AJ&K	Islamabad
7	Dr Syed Nadeem-ur-Rehman	Director Training	Health	Muzaffarabad
8	Mr Javed Akhtar	Deputy Director Nutrition	Health	Muzaffarabad
9	Dr Masood Bukhari	Executive Director AIMS	Health	Muzaffarabad
10	Dr Mumtaz	Microbiologist AIMS	Health	Muzaffarabad
11	Dr Sardar Mehmood Khan	Consultant	WHO	Muzaffarabad
12	Mr Mukhtar Ahmad Awan	Social Welfare Officer	Social Welfare Department	Muzaffarabad
13	Dr Abdul Aziz Qureshi	Additional Director	Livestock	Muzaffarabad
14	Dr M. Anwar Butt	Ms DHQ Neelum	Health	Neelum Valley
15	Dr Abdul Mateen	DHO Neelum	Health	Neelum Valley
16	Dr Zaffar Iqbal	Ms DHQ Jhelum Valley	Health	Jhelum Valley
17	Dr Naseem Hasrat	Director CDC	Health	Muzaffarabad
18	Dr Mashood Arif	Resident Orthopedic (YDA Rep.)	YDA	Muzaffarabad
19	Dr Taufeeq Ahmed	Resident G. Surgery (YDA Rep.)	YDA	Bagh
20	Dr Farhat Shaheen	Regional Director, MNCH	Health	Muzaffarabad
21	Dr Tahir Mughal	DHO Jhelum Valley	Health	Jhelum Valley
22	Dr Abdul Wahid	NPO	WHO	Muzaffarabad
23	Mr Sardar Riaz-ul-Hassan	CDC	Health	Muzaffarabad
24	Dr Basharat Khan	President PMA	Health	Muzaffarabad
25	Dr Bilal Ahmed Baig	Resident Surgeon	YDA	Muzaffarabad
26	Mr Shafoor Malik	AD	Health	Muzaffarabad
27	Mr Mir Muhammad Arif	S.G (HEO)	Health	Muzaffarabad
28	Ms Syeda Maryam Shaheen	Nursing Lecturer (YNA)	Health	Muzaffarabad
29	Ms Shahida Sarwar	Lady Health Supervisor	Health	Muzaffarabad
30	Ms Fozia Jabeen	LHV + President MCH Association AJ&K	Health	Muzaffarabad
31	Dr Usman Mehboob Awan	Chairman HEF	Health	Muzaffarabad

Annexe 5. Analysis of recurrent and developmental budget, Health Sector, AJ&K, FY 2010–2011 to 2020–21

Year	Health Sector Budget (PKR Million)				
	Total	Recurrent		Development	
	N	n	%	N	%
2010–11	2455	2288	93.2	167	6.8
2011–12	3262	2709	83.0	553	17.0
2012–13	4180	3284	78.6	896	21.4
2013–14	4494	3802	84.6	691	15.4
2014–15	4288	4015	93.6	273	6.4
2015–16	5250	4846	92.3	404	7.7
2016–17	6351	5713	90.0	638	10.0
2017–18	7395	6626	89.6	769	10.4
2018–19	9113	8394	92.1	719	7.9
2019–20	10254	9117	88.9	1137	11.1
2020–21	11272	10272	91.1	1000	8.9

Source: Finance/Planning & Development Department, AJ&K, Muzaffarabad.

Annexe 6. Comparison of recurrent and development budgets, AJ&K, 2010–11 to 2017–18

Year	Overall Budget			Health Sector Budget			Share of Health Sector In Total Budget (In % Term)	% (Increase/Decrease) As Compared To Previous Years (Overall Budget)	% (Increase/Decrease) As Compared To Previous Year (Health Sector Budget)
	Recurrent	Development	Total	Recurrent	Development	Total			
2010–11	31,265	6,283	37,548	2,288	167	2,455	7	15	24
2011–12	36,265	8,284	44,549	2,709	553	3,262	7	19	33
2012–13	41,405	9,547	50,952	3,284	896	4,180	8	14	28
2013–14	47,500	10,500	58,000	3,802	691	4,493	8	14	7
2014–15	55,424	10,500	65,924	4,015	273	4,288	7	14	–5
2015–16	59,615	11,500	71,115	4,846	404	5,250	7	8	22
2016–17	63,500	12,551	76,051	5,713	638	6,351	8	7	21
2017–18	71,130	23,280	94,410	6,626	769	7,395	8	24	16

Source: Finance/Planning & Development Department, AJ&K, Muzaffarabad.

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