

Chapter-4

Health Sector

D.G Khan Regional Development Plan

Table of Contents

Chapter 1: Introduction	1
Chapter 2: Methodology	9
D.G Khan District Healthcare Challenges	17
D.G Khan Health Sector Issues:.....	18
Muzaffargarh Health Sector Issues	20
Rajanpur District Healthcare Challenges	20
Rajanpur Health Sector Issues.....	21
Layyah District Healthcare Challenges.....	22
Layyah Health Sector Issues	23
Chapter 3: Gaps Identification	23
3.2 Spatial Mapping of Uncovered Areas	28
3.2.1 Uncovered areas for BHU services.....	28
3.2.2 Uncovered areas for RHCs services	31
3.2.3 Uncovered areas for RHCs services	32
3.2.5 DHQs Services	34
Chapter 4: Way Forward and Proposed Interventions	35
Proposed Areas of Intervention.....	35
Way Forward.....	37

List of Tables

Table 1: Health Facility in D.G Khan Division	5
Table 2: Disease Prevalence in D.G Khan Division and in its Districts	6
Table 3: Mother and Child Care Parameters.....	8
Table 4: Family Planning Indicators.....	10
Table 5: HH Satisfaction Level of BHUs	11
Table 6: Thematic Areas of Interventions as Per Punjab Health Sector Strategy 2019-2028	12
Table 7: Required Beds as Per Standards for Health Facilities.....	13
Table 8: Missing Health Facilities in D.G Khan District	19
Table 9: Missing Health Facilities in Muzaffargarh District	20
Table 10: Missing Health Facilities in Rajanpur District.....	22
Table 11: Progress Against Province Average and SDG Target.....	23
Table 12: District-level UHC Service Coverage Index 2021	24
Table 13: WHO-Recommended 4 ANC Visits, Birth Attended by Skilled Personals and Beds Per 1000 Population.....	25
Table 14: Percentage of Household Having Basic Drinking Water, Sanitation and Hygiene Services	26
Table 15: Short- Term to Medium Term Proposed Projects	34

List of Figures

Figure 1: Methodological Framework.....	15
Figure 2: Assessment Based on Life-Course Approach (Division-Wise).....	16
Figure 3: Stakeholder Meetings & Visits to Health Facilities.....	18
Figure 4: Health Accessibility of BHU in D.G Khan division.....	28
Figure 5: Health Accessibility of RHC in D.G Khan Division.....	30
Figure 6: Health Accessibility of THQ in D.G Khan Division	31
Figure 7: Health Accessibility of DHQ in D.G Khan Division	

Chapter 1: Introduction

Dera Ghazi Khan is located on the southern border of Punjab province, at the intersection of Punjab, Khyber Pakhtunkhwa (KPK), and Balochistan. The division is an administrative division in Punjab province. D.G. Khan Division encompasses four districts and 14 tehsils, covering the extreme southwestern part of Punjab and approximately 20% of the province's total area. The division includes the districts of D.G. Khan, Rajanpur, Layyah, and Muzaffargarh. D.G Khan district is considered as one of the most centrally located districts in the country, being surrounded by six other districts: three in Punjab, two in Balochistan, and one in KPK. The district comprises four tehsils: Dera Ghazi Khan, Taunsa Sharif, Koh e Suleman, and Kot Chutta.

According to the 2017 census, the population of Punjab is 110 million and its growth rate is roughly 2.53%. In Punjab, about 63.14% of the population lives in rural areas and 36.86% lives in urban areas. Dera Ghazi Khan city serves as the district's headquarters and has a population of 2,872,631. Muzaffargarh district has the largest population among the districts in the region, with approximately 4,328,549 population. It is followed by D.G. Khan district, then Rajanpur with a population of 1,996,039, and Layyah with a population of 1,823,995.

Health is crucial for assessing a country's economic performance, human development and stability, and it plays a key role in achieving local and national sustainable development goals. The health sector has a substantial impact on social and economic aspects by raising productivity and well-being among people, lowering healthcare costs through preventive care. It promotes equity through enhancing quality of life, facilitating access to necessary health services, and contributing social stability. Furthermore, the health sector is essential in achieving sustainable development objectives, ensuring healthy lives, and fostering wellbeing of people.

The healthcare system in D.G. Khan Division includes private, public, and semi-government hospitals across all four districts. However, the division experiences significant health disparities, with low performance on major health indicators such as under-five mortality rates, infant mortality rates, and the prevalence of communicable diseases. Several factors contribute to the poor healthcare status in the region, including limited access to healthcare services, low quality of services at primary health facilities, missing services at secondary facilities, inadequate emergency

and waste management, and insufficient infrastructure development. There are numerous challenges remain within the healthcare system in the region, including limited access to healthcare services. Rural areas in the division often lack sufficient healthcare infrastructure, such as hospitals, clinics, and medical professionals. Consequently, many residents, especially those in remote or underserved areas, have limited access to healthcare services.

Table 1: Health Facility in D.G Khan Division

Facility type		Health facilities in D.G Khan Division				Total
		D.G. Khan	Layyah	Muzaffargarh	Rajanpur	
Hospital	NO.	7	8	7	5	27
	Beds	1133	632	1053	313	3131
RHCs	NO.	13	6	14	7	40
	Beds	180	120	260	145	705
BHUs	NO.	55	36	75	32	198
	Beds	106	72	144	64	386
Dispensaries	NO.	32	33	46	30	141
	Beds	0	0	37	0	37
MCH centers	NO.	5	2	5	1	13
	Beds	0	0	4	4	8
T.B Clinics	NO.	0	0	0	0	0
	Beds	0	0	0	0	0
Trauma centers	NO.	0	0	1	0	1
	Beds	0	0	50	0	50

Source: Punjab Development Statistics (PDS) 2022

In the D.G. Khan Division, a comprehensive network of health facilities meets the population's healthcare needs. The division includes 27 hospitals, 40 Rural Health Centers (RHCs), 198 Basic Health Units (BHUs), 141 dispensaries, and 13 Maternal and Child Health (MCH) centers, but no Tuberculosis (T.B.) clinics. These facilities are spread across the districts of D.G. Khan, Muzaffargarh, Rajanpur, and Layyah, ensuring accessibility for residents in both urban and rural areas. The total bed capacity in D.G. Khan Division's health facilities is 4,317 beds. Hospitals provide the largest share with 3,131 beds, followed by RHCs with 705 beds, BHUs with 386 beds, dispensaries with 37 beds, and MCH centers with 8 beds. Although T.B. clinics are crucial for healthcare delivery, they do not offer inpatient services and therefore do not have beds. Overall, this distribution reflects the division's efforts to provide adequate infrastructure to effectively address diverse healthcare needs.

The following tables present key health performance indicators from the PSLM 2020 and MICS 2019 reports. This data allows for a comparative analysis of performance across the four districts of the D.G. Khan Division: D.G. Khan, Muzaffargarh, Rajanpur, and Layyah. In the tables, red-highlighted cells indicate sectors that are underperforming and underutilized compared to the other districts. Green cells specify overall superior performance within the D.G. Khan Division, while yellow cells represent performance that is lower than one district but better than another.

Table 2: Disease Prevalence in D.G Khan Division and in its Districts

<i>Indicator</i>	<i>Categorization</i>	<i>Punjab</i>	<i>D.G Khan</i>	<i>Layyah</i>	<i>Muzaffargarh</i>	<i>Rajanpur</i>
<i>Percentage of Children Aged 12-23 Months That Have Been Immunized (based on recall) At least one immunization</i>	Urban	99	100	100	92	95
	Rural	98	94	100	97	98
	Total	98	94	100	97	97
<i>Percentage of Children Aged 12-23 Months That Have Been Immunized (BASED ON RECORD) - FULLY IMMUNIZED</i>	Urban	81	96	100	67	95
	Rural	81	86	98	68	90
	Total	81	87	98	68	90
	Urban	88	100	100	81	95

<i>Percentage of Children Aged 12-23 Months That Have Been Immunized</i> (C: BASED ON RECALL AND RECORD) - FULLY IMMUNIZED	Rural	89	87	98	83	91
	Total	89	89	98	83	91
Percentage of Children 12-23 Months That Have Been Immunized	BCG	87	88	100	75	91
	PENTA1	86	88	100	75	91
	PENTA2	84	88	99	74	90
	PENTA3	84	88	99	74	90
<i>Percentage of Children 12-23 Months that have been Immunized.</i> BY TYPE OF ANTIGEN-BASED ON RECORD AND RECALL 5	BCG	96	89	100	91	92
	PENTA1	95	89	100	90	92
	PENTA2	92	89	99	90	91
	PENTA3	92	89	99	89	91
	PNEU1	94	89	100	89	93
	PNEU2	92	89	99	88	93
	PNEU3	91	89	99	88	93
	POLIO1	94	94	100	91	95
	POLIO2	92	94	98	89	94
	POLIO3	90	94	99	86	94
	MEASLES	91	89	99	86	93
	<i>Percentage of Children 12-23 Months That Have Been Immunized DONE 4</i>	BCG	87	88	100	75
PENTA1		86	88	100	75	91
PENTA2		84	88	99	74	90

<i>By type of antigen based on record</i>	PENTA3	84	88	99	74	90
	PNEU1	85	88	100	74	92
	PNEU2	84	88	99	73	91
	PNEU3	83	88	99	73	91
	POLIO1	87	93	100	81	94
	POLIO2	83	88	98	72	92
	POLIO3	82	88	99	69	92
	MEASLES	83	88	99	71	91

Source: MICS 2017-2018, PSLM: 2020

The table indicates that within the D.G. Khan Division, districts like D.G. Khan, Layyah, and Rajanpur report higher incidences of sickness or injury compared to the Punjab average. Additionally, specific rural areas in D.G. Khan and Muzaffargarh districts exhibit comparatively lower rates of child immunization, based on both records and recall. These findings offer valuable insights for developing targeted health interventions and policies to enhance healthcare access and immunization coverage in the areas most in need.

Table 3: Mother and Child Care Parameters

<i>Indicator</i>	<i>Categorization</i>	<i>Punjab</i>	<i>D.G Khan</i>	<i>Layyah</i>	<i>Muzaffargarh</i>	<i>Rajanpur</i>
<i>Percentage Distribution of Population Fallen Sick or Injured During Last</i>	Sick or injured	6.79	8.16	9.29	3.37	6.96
	Health Consultation	96.37	98.98	99.68	97.03	99.48
Children Under 5 Suffering from Diarrhea In Past 30 Days (D2)	URBAN	5	22	14	13	3
	RURAL	6	16	19	3	4
	TOTAL	6	17	18	4	3
Treatment Of Diarrhea in Children Under 5 Years where Practitioner was Consulted (d3)	URBAN	89	98	100	86	100
	RURAL	90	95	84	80	90
	TOTAL	90	95	86	82	90
Treatment Of Diarrhea in Children Under 5 Years where ORS was given to child (d4)	URBAN	73	65	100	72	100
	RURAL	77	89	96	61	96
	TOTAL	76	84	97	66	96
Percentage with comprehensive HIV knowledge - Women		4.3	2.2	2.5	2.0	1.2
Percentage with comprehensive HIV knowledge - Men		9.4	9.9	13.8	8.8	4.1

Source: MICS 2017-2018, PSLM: 2020

The table 3 provides an overview of health indicators in various districts of Punjab, Pakistan, including D.G. Khan, Muzaffargarh, Layyah, and Rajanpur. Notably, the percentage of the population reporting sickness or injury during their last health consultation is consistently lower in Muzaffargarh (3.37%) compared to the Punjab average (6.79%), suggesting relatively better health conditions in this region. Conversely, Layyah has a higher percentage of people falling sick or injured (9.29%), which is worse than the Punjab average. Regarding the treatment of diarrhea

in children under five, Muzaffargarh district shows a lower rate of ORS (Oral Rehydration Solution) usage (66%) compared to Punjab (76%), indicating a slightly worse outcome in managing diarrhea in young children in Muzaffargarh. Overall, while some districts show better health indicators than the Punjab average, D.G. Khan and Muzaffargarh stand out with comparatively poorer figures in these specific areas.

Table 4: Family Planning Indicators

<i>Indicator</i>	<i>Categorization</i>	<i>Punjab</i>	<i>D.G Khan</i>	<i>Layyah</i>	<i>Muzaffargarh</i>	<i>Rajanpur</i>
Pregnant Women that have received Tetanus Toxoid Injection as % of Pregnant Women (m1)	Urban	87	55	83	91	66
	RURAL	82	49	96	80	59
	TOTAL	83	50	94	81	60
Percentage of women currently married who are using no method		65.6	79.4	60.0	75.3	79.7
Percentage of women currently married who are using any method		34.4	20.6	40.0	24.7	20.3
Unmet need for family planning		17.8	21.2	16.0	23.5	19.5
Met need for family planning (currently using contraception)		34.4	20.6	40.0	24.7	20.3
Total demand for family planning		52.2	41.7	56.0	48.2	39.8
Percentage of women who, during the pregnancy had blood pressure measured, urine and blood sample taken, weight measured, importance of spacing and information provided for family planning methods		11.4	2.9	7.3	2.5	2.2
Percentage of women who received at least 2 tetanus toxoid containing vaccine doses during the pregnancy of the most recent live birth		69.7	46.5	78.8	78.6	54.0

Delivery in health facility (public / private)		73.3	41.2	61.8	50.7	37.2
Post-natal health check	for the newborn	69.6	59.1	72.0	58.2	47.6
	for the mother (In facility or at home)	70.1	55.2	72.9	56.8	46.8

Source: MICS 2017-2018, PSLM: 2020

The above table represents a range of important health indicators in all districts of D.G Khan division, including D.G Khan, Muzaffargarh, Layyah and Rajanpur. Notably, when compared to the Punjab average, several indicators show differences. In D.G Khan division, both urban and rural areas of Layyah district and urban region of Muzaffargarh indicate a higher percentage of pregnant women received Tetanus Toxoid Injections than the total Punjab average of 83%, reflecting better maternal health practices. However, in terms of "Percentage of women currently married who are using no method, D.G Khan and Rajanpur stands out with a relatively higher percentage 79.4% and 79.7% respectively, which is worse than the Punjab average of 65.6%, suggesting a potentially higher unmet need for family planning in both districts. This data underscores variations in health indicators across these districts, with D. G Khan, Muzaffargarh, Layyah and Rajanpur showing some challenges in family planning compared to the Punjab average.

The table below presents data on care-seeking behavior during diarrhea and household satisfaction with Basic Health Units (BHUs) in all districts of D.G Khan division: Muzaffargarh, Layyah, Rajanpur and D.G Khan. Notably, the percentage of people seeking advice or treatment for diarrhea from public health facilities varies significantly among the districts, with Layyah having the highest at 17%, while D.G Khan has the lowest at 7.6%. Conversely, the percentage of individuals seeking care from private health facilities is highest in D.G Khan (65.6%) and lowest in Layyah (52.6%). It's important to highlight that Muzaffargarh has the highest percentage (28.3%) of individuals who did not seek any advice or treatment for diarrhea, which is comparatively worse than the Punjab average.

Table 5: HH Satisfaction Level of BHUs

Care Seeking Behaviors During Diarrhea - Top Disease					
		D.G Khan	Layyah	Muzaffargarh	Rajanpur
Advice or treatment was sought from	Public HF (%)	7.6	17.0	10.8	12.5
	Private HF (%)	65.6	52.6	55.0	56.4
No advice or treatment sought		24.3	25.9	28.3	23.1
HH satisfaction level by BHUs		95.02	35.24	44.64	42.55

Source: MICS 2017-2018, PSLM 2019-2020

Chapter 2: Methodology

Mixed method approach is used. Desk review of existing documents, datasets and reports on health sector has been done. Existing government policy documents has been consulted for strategic direction. After collection and review of secondary data, the next step was the ground truthing of the data and quality assessment of health facilities through field visits/ stakeholder consultation. Analysis has been done on the collected data and the findings of stakeholder meetings. Furthermore, the spatial analysis of health accessibility in the districts has also been undertaken along with the identification of under-served inaccessible pockets/areas. Based on health infrastructure assessment, facilities have been identified with upgradation and strengthening needs, to reduce the burden of patient influx

2.1 : Strategic Direction

The strategic directions for Health Plan are extracted from the following policy documents of the Government of the Punjab, for synching short-term, medium-term, and long-term goals provincial goals:



Linkages between Health Plan and Punjab Health Sector Strategy 2019- 2028:

The Punjab Health Sector Strategy 2019-28 provides the framework for the future planning, management, and service delivery for Punjab Health Departments for the next decade. The Strategy focuses on leading Punjab towards better performance for attaining the desired goal of providing quality healthcare to the people.

Following are some of the strategic interventions identified in Punjab Health Sector Strategy, which are also included in this plan:

Table 6: Thematic Areas of Interventions as Per Punjab Health Sector Strategy 2019-2028

Punjab Health Sector Strategy 2019-2028		
Sr.#	Thematic Areas	Strategic Interventions
1	Reproductive Maternal Newborn Child Health, Nutrition & Family Planning	Establish MNCH Hospitals in public sector as well as in partnership with private sector which may be funded by Punjab Health Foundation
2	Medicines and Biomedical Equipment	Proper storage of medicines at provincial and district level
3	Health Management Information System	Develop and implement a uniform and Tertiary-level Health Information System

Linkages between Health Plan and National Reference Manual on Planning and Infrastructure Standards 1983:

The Manual identifies major standards and guidelines for the establishment of both primary and secondary health facilities such as coverage area, types of facilities provided etc. To facilitate the geographical distribution of health facilities, the manual has set a minimum standard of 2 beds/1000 population in the region. The table below shows the existing bed capacity in health facilities of D.G Khan and the required beds per population as per the National Reference Manual on Planning and Infrastructure Standards.

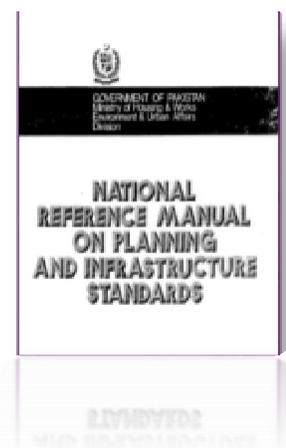


Table 7: Required Beds as Per Standards for Health Facilities

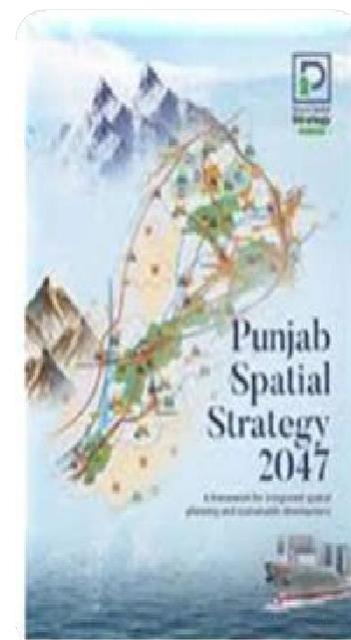
Districts	Population (Census 2017 - million)	Existing Beds (PDS 2022)	Beds per 1000 population	Population projection 2024	Required beds per population (2024)
D.G Khan	2,872,631	1419	0.5	3,528,174	0.4
Muzaffargarh	4,328,549	1548	0.4	5,194,681	0.3
Layyah	1,823,995	824	0.5	2,181,518	0.4
Rajanpur	1,996,039	526	0.3	2,481,695	0.2
Total	11,021,214	4317	1.7	13,386,068	1.3

Source: Punjab Development Statistics 2022

Thus, to increase the beds to population ratio in the region, new facilities can be introduced in the unserved areas.

Linkages between Health Plan and Punjab Spatial Strategy 2018-2047:

For the achievement of SDGs, PSS calls for an integrated health eco-system with adequate expenditure on health sector targeting the most deprived districts on high priority. The figure below depicts the health-related disparities and priority zones, based on the Health Dimension Index, incorporating major health indicators like infant mortality rate, child mortality rate (aged under 5), population diagnosed with major diseases (Hepatitis and Tuberculosis), immunization coverage and percentage of cases for pre- and post-natal consultation. Only focusing on the D.G Khan division, the districts D.G Khan, Muzaffargarh and Rajanpur are high priority districts in terms of healthcare provision and performance. PSS points out that need remove disparities in health infrastructure development as compare the other region of Punjab.



2.2 Approach and Methodology:

The project had two distinct phases. The first phase includes a detailed assessment and situation analysis of the region and identification of gaps using the mixed method research (quantitative and qualitative) through collection and analysis of data from existing provincial and national surveys and reports, stakeholder consultations and field visits. Additionally, the spatial analysis (wherever the spatial coordinates and data available) using GIS tools was applied, which further assisted in identifying the gaps and operational issues prevailing in the health facilities. The second phase includes recommendations for sustainable interventions which can be implemented to increase the level of development in the region. Following five data collection and analysis techniques were utilized:



- Desk Review (using life course approach)
- Field visits for rapid condition assessment
- Stakeholder Engagement (using SWOT analysis)
- Spatial analysis using GIS tools.

The following figure gives a preview of the methodological framework used in this health plan.

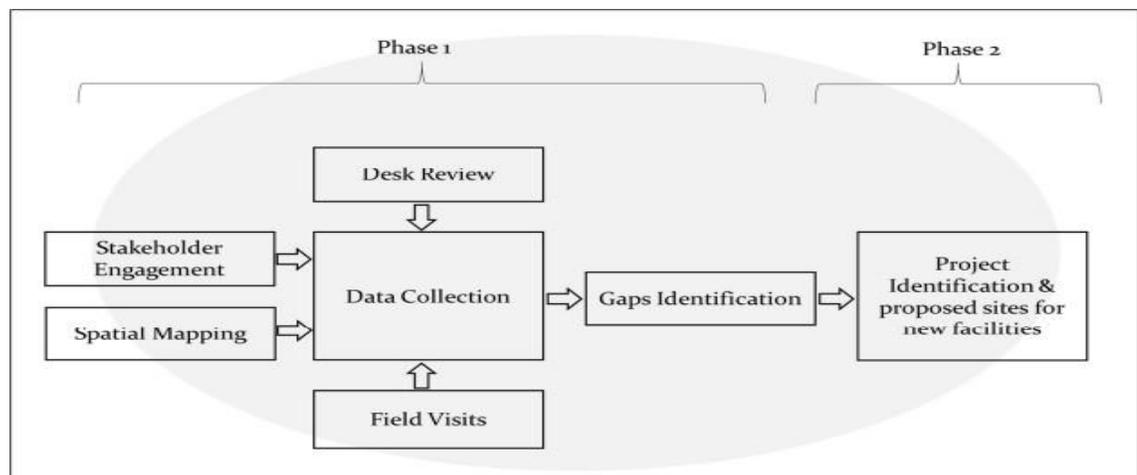


Figure 1: Methodological Framework

2.2.1 Desk Review:

Initial review of existing provincial and national reports and survey related to health was conducted to get collect baseline indicators and overview of the prevailing situation in the region. Secondary sources included District Health 12 Information System (DHIS) dashboard1 Population Census 2017, Pakistan Standard of Living Measurement (PSLM) 2019-20, Multiple Indicator Cluster Survey (MICS) 2017-18, Punjab Development Statistics (PDS) 2019 and others. Additionally, the Health Plan is based on the Life Course theoretical model which provided a framework for data collection. Life course model focuses on the importance of general health and wellness over the life course (i.e., childhood adolescence and adulthood) as it relates to maternal and child health. Adopting a life course approach is essential to explore the factors affecting children health and nutrition.

The framework for analyzing major health indicators at different stages of the life course is highlighted in the figure below, providing an opportunity to investigate the factors that influence Mother and Child Health (MCH). Various services are needed at different points in the life course. For example, outpatient and outreach services can encourage behavior change and offer preventive care, while hospital or clinical care can offer large-scale services like emergency obstetric care and care for small and sick newborns. This leads to a matrix of integrated packages involving different types of care and the impacting health indicators at various stages of a woman's life (adolescent, reproductive health, pregnancy and labor birth, post-natal maternal and newborn and child). Thus, mother and child health should be the key pillar of healthcare plan.

Figure 2: Assessment Based on Life-Course Approach (Division-Wise)

	Adolescent	Reproductive Health	Pregnancy, Labour & Birth	Postnatal Maternal & Newborn	Child
Hospital / Clinical Care	% of children with ARI (infection) for whom no advice or treatment sought	% of W who received HIV counselling during antenatal care	% of W whose delivery was assisted by skilled attendant	% of Institutional deliveries	Under-5 mortality (per 1000 lives birth)
	(16.4) 2 nd Highest among all districts of Punjab: Layyah	(1.4) 4 th Lowest among all districts of Punjab: Rajapur	(43.8) Lowest among all districts of Punjab: Rajapur	(41.2) Lowest among all districts of Punjab: Rajapur	(86) 6 th Highest among all districts of Punjab: Muzaffargarh
Outpatients & outreach services	% of children who have clinical anemia (iron deficiency)	Unmet need for Family planning	WHO recommended 4 ANC visits?	Post-natal care (newborn)	Immunization
	(18.6) 2 st Highest among all districts of Punjab: Muzaffargarh	(23.5) 4 th highest among all districts of Punjab: Muzaffargarh	(27.2) Lowest among all districts of Punjab: Rajapur	(47.6) 2 nd Lowest among all districts of Punjab: Rajapur	(47) 2 nd Lowest among all districts of Punjab: Rajapur

Source: MICS 2017-18, National Nutrition Survey 2018

In the region, significant challenges persist in certain areas, including the percentage of children with acute respiratory infections (ARI) not receiving advice or treatment, as well as the unmet need for family planning per 1000 live births, and HIV counseling during antenatal care, immunization coverage, WHO-recommended 4 ANC visits, and post-natal care indicating opportunities for improvement. The districts of Rajanpur and Muzaffargarh rank among the least successful within these particular parameters.

2.2.2 Stakeholder Consultations and Facility Visits:

For condition assessment of the health facilities, the Urban Unit healthcare sector team visited all the districts of D.G Khan division during April 2024. Figure below highlights the pictorial view of health facilities which were visited by the Urban Unit team. A rapid condition assessment survey was done to gauge the existing situation of the health facilities. These surveys were based on Minimum Service Delivery Standards (MSDS) 2017 (Punjab Health Commission) and are attached in the appendix A. The Urban Unit healthcare sector team during field visit for condition

- **Chief Executive Officer (CEO), D.G Khan**
- **District Health Officer, D.G Khan**
- **Chief Executive Officer (CEO), Muzaffargarh**
- **District Health Officer, Muzaffargarh**
- **Chief Executive Officer (CEO), Layyah**
- **District Health Officer, Layyah**
- **Chief Executive Officer (CEO), Rajanpur**
- **District Health Officer, Rajanpur**
- **Deputy Project Director, Koh e Suleman**
- **Koh e Suleman Development Authority**

assessment of various health facilities in the D.G Khan division in 2024, also met various officials and stakeholder including:



Figure 3: Stakeholder Meetings & Visits to Health Facilities

Consultations with stakeholders were conducted for the shared understanding of the prevailing health condition in D.G Khan. Majority of the stakeholders involved were from district administration, and the rest of the participants were from primary and secondary healthcare facilities. The data was collected through individual interviews and respondents were asked to provide feedback through open comments approach, where they were asked to identify key challenges with relation to the four types of health facilities:

- Institutional Capacity & Budget Reform
- Improvement in existing health facilities & ambulance services
- Emergency and waste management challenges to existing health system were identified by the stakeholders

D.G Khan District Healthcare Challenges

The detail wise data collect from department is as follows;

Table 8: Missing Health Facilities in D.G Khan District

Type of Facilities	No. Of Facility	Total No of Bed (Functional & Non-functional)	Missing HR/Doctor	Missing Services/ Medicines	Missing Health Facilities/ Infrastructure	Missing equipment
BHU	50	107	Nurses, lab technicians, general duty staff, doctors	UPS, Generator, AC, security service, Fan, generator, internet, UPS	Boundary wall, road infrastructure, ambulance 1122 and 1034, non-adequate building condition, solar system, sewerage system, 16 BHU have solarization but are not function	Ultra sound, patient screening
RHC	9	160	Surgeon staff, general duty staff, Pharmacist. gynecologist	Security services, electricity	Sewerage system, Solar system, road infrastructure, AC, Ambulance for all patients 1122, poor building condition, Boundary wall	X-Ray, non-availability of condemned items, Dental unit

THQ	2	193	Janitorial staff, Security, radiologist	Waste management system, construction of mortuary,	Extension of male and female ward, Parking shed, Cafeteria, revamping of trauma center, model pharmacy, Sewerage system	Defibrillator, CBC Analyzer (Kot Chutta), Dental X- Ray machine, Color doppler ultrasound machine, c- arm printer, dental unit
DHQ	NA	Not available	NA	NA	NA	NA

D.G Khan Health Sector Issues:

- Unavailability of diagnostic centers for cancer, MRI, Tumor and Thalassemia treatments
- Chronic Exposure to uranium in drinking water is linked to kidney damage, increased cancer risk and reproductive issues
- There are significant hurdles in accessing healthcare facilities, including the lack of transport facilities, hard-to-reach areas, some of which are insecure, security issues for female medical staff, and the absence of residential areas.
- Mobile vans can be an effective way to access healthcare facilities.
- The district has the highest prevalence of diseases related to cancer, thalassemia, hepatitis C, and HIV. There is limited knowledge about HIV/AIDS and hepatitis C, including their transmission and preventive methods.
- The lack of electricity and transportation, inadequate security for female medical staff, absence of residential facilities for doctors, and poor telephone signals make it challenging to reach distant Basic Health Units (BHU) and Rural Health Centers (RHC). Therefore, mobile vans are a suitable option in such areas.
- Flood localities have been announced, with at least one flood zone being affected during the flood season. The establishment of a dam is highly recommended.
- Waste management should be privatized with special package to its HR. Janitor staff should be outsource

Muzaffargarh District Healthcare Challenges

Table 9: Missing Health Facilities in Muzaffargarh District

Type of Facilities	No. Of Facility	Total No of Bed (Functional & Non-functional)	Missing HR/Doctor	Missing Services/ Medicines	Missing Health Facilities/ Infrastructure	Missing Equipment
BHU	72	142	General duty staff, doctors, lab technicians, nurses	Internet and security services, medicine shortage	Poor building condition, sewerage system, road infrastructure, generator, AC, Fan, ambulance (gynae and all patients), solar system, boundary wall, UPS	Ultra sound, availability of condemned items, thermal printers,
RHC	13	242	HR requirement Category B facilities	Lack of medicine	Solar system, ambulance for all patients and gynae,	
DHQ	1	371		Pharmacy for cardiac medicine, Bronchoscopy, Sui gas connection for incinerator	Waiting area for Paeds and ICU, industrial water cooler	MRI, endoscopy, incubator, laparoscopy, Paeds ventilators, Audiometry
THQ	4	336	Pulmonologist, chest specialist	OT ceiling light,	Extension of nursery, paeds, male female wards, labor room and OPD block construction of cafeteria, construction of parking shed, general store, medicine store, record room	C-arm printer, X-ray, Color doppler ultra sound, CBC analyzer, digital X ray, Diathermy machine, Scanners, thermal printers, biometric device for attendance

Muzaffargarh Health Sector Issues

- Hepatitis B and C are prevalent in overall Muzaffargarh district and in DHQ due to unsafe injections, blood transfusions and poor infection control
- Use of contaminated tools such as razors, scissors and needles
- Inadequate sterilization protocols and strict hygiene plays a major role in transmission of such infections
- The diagnostic facilities for cancer and tumor patients in DHQ are not available
- Non-presence of waiting area in DHQ
- The absence of nursery in DHQ is a significant concern for maternal and child health in the region
- no ventilator in THQ Kot Addu. Radiologist and pulmonologist are also not available in THQ.
- The use of manual cutting tools is widespread and toka injuries are common in the region which results in blood loss, infection and potential disability
- High risk of infections occurs as the district have poor sanitation facilities
- Insufficient public health campaigns and education program.
- Cultural and social barriers exist within the district
- Safe drinking water is not accessible in district Muzaffargarh
- Poor sanitation facilities contribute to the spread of waterborne and vector-borne diseases

Rajanpur District Healthcare Challenges

Table 10: Missing Health Facilities in Rajanpur District

Type of Facilities	No. Of Facility	Total No of Bed (Functional & Non-functional)	Missing HR/Doctor	Missing Services/ Medicines	Missing Health Facilities/ Infrastructure	Missing equipment
--------------------	-----------------	---	-------------------	-----------------------------	---	-------------------

BHU	64	125	Nurses, general duty staff, doctors	UPS, Generator, AC, security service, Fan, generator, internet, UPS	Boundary wall, road infrastructure, ambulance 1122 and 1034, non-adequate building condition, solar system, sewerage system	Ultra sound, patient screening
RHC	14	281	Surgeon staff, general duty staff, lab technicians	Security services, electricity	Sewerage system, Solar system, road infrastructure, AC, Ambulance for all patients 1122, poor building condition, Boundary wall	
THQ	2	185	Janitorial staff, Security	Waste management system, construction of mortuary,	Construction of warehouse, Parking shed, Cafeteria, revamping of trauma center, model pharmacy, Sewerage system	Defibrillator, CBC Analyzer, Dental X-Ray machine, BP apparatus, c-arm printer, dental unit, tongue depressor, chemistry analyzer
DHQ	1	220	Consultant, NMS staff	Water reservoir, modal pharmacy	Renovation of trauma center, Construction of parking shed, cafeteria, waste management system (yellow room), sewerage system, male female ward extension	MRI, Dental unit, Color Doppler ultra sound machine, dental X-ray machine, defibrillator, C-arm machine,

Rajanpur Health Sector Issues

- The shortage of medicine throughout the hospitals in Rajanpur district is indeed a significant problem that can have serious consequences for the health and well-being of the community.
- Lack of essential equipment and HR in many departments in DHQ Rajanpur.
- HR is insufficient in many BHUs and RHCs in Rajanpur
- Residential blocks need to be established to ensure that doctors can stay safely in these no-go zones
- In flood-prone areas where no Basic Health Units (BHUs) or Rural Health Centers (RHCs) exist or can survive after a flood, container-based hospitals (BHUs or RHCs) with a pillar

system should be established.

- There is no proper filtration and direction for patients which can guide him about doctors, sometimes they go to irrelevant doctor for treatment
- The upcoming project should include a dedicated package for preventive policies targeting high-prevalence diseases in Rajanpur, applicable at all levels of healthcare facilities. Preventive campaigns or awareness initiatives should be disseminated through hospitals, schools, or other public entities. For Universal health insurance, the patient should have CNIC but in rural and triable areas most women have no CNIC and they are unable to take Universal health insurance service.

Layyah District Healthcare Challenges

Table 21: Missing Health Facilities in Layyah District

Type of Facilities	No. Of Facility	Total No Of Bed (Functional & Non-functional)	Missing HR/Doctor	Missing Services/Medicines	Missing Health Facilities/ Infrastructure	Missing Equipment
BHU	36	72	General duty staff, doctors, lab technicians, nurses	Internet	sewerage system, road infrastructure, generator, AC, Fan, ambulance	Availability of condemned items
RHC	6	120	Doctors, surgeon staff, general duty staff	Security services	Ambulance (all patients),	X-ray machine
DHQ	1	400				MRI, endoscopy, PCR lab

THQ	2	100				Dialysis machine, ETT machine, digital X-ray machine, Cardiac monitor, serum electrolytes analyzer machine, echocardiography machine
------------	---	-----	--	--	--	--

Layyah Health Sector Issues

- Lack of medicine in DHQ Layyah due to Patient flow as the hospital covers a large population
- RHC level medicine is insufficient according to number of patients
- Cardiology department in and dialysis machine in DHQ Layyah is overloaded
- In Layyah district there is a need of teaching hospital for educating and training the local professionals or affiliate the DHQ with medical college
- The THQ level hospital Chock Azam is overcrowded because it is central point and easy to access but there is only THQ level hospital.
- The THQ hospital Chobara are issues of necessary HR like Pharmacist, Dental Surgeon, Pediatrician etc.
- At RHC 161/A only BHU level HR is available

Chapter 3: Gaps Identification

3.1 Challenges and Constraints

3.1.1 Poor progress against SDGs

Health plays a vital role in human development and has an influence on the advancement of society. Investing in a society's health is crucial to raising the physical health of workers and improving productivity by their capacities, such as strength. Furthermore, access to high-quality, reasonably priced healthcare is a key



indicator of overall well-being. The D.G Khan region currently performs poorly on a number of important health indicators, including infant mortality rates, antenatal care, and number of doctors etc.

The D.G Khan Division demonstrates a significant lack of progress across key health-related Sustainable Development Goals (SDGs) indicators. It can only be seen from the following figure that high rate of under-five mortality of the division i.e., 71 lives per 1000 births, which is considerably distant from the SDG target of 25 deaths per 1000 births by 2030. Similar disparities are observed across neonatal mortality rate and immunization coverage.

Table 12: Progress Against Province Average and SDG Target

	D.G. Khan Division	Province average	SDG Target
Under-five mortality (lives per 1000 births)	71	69	25
Neo-natal mortality (lives per 1000 births)	39	41	12
Immunization Coverage	68.9%	74.7%	100%
Multi-dimension Poverty Index	52.1%	26.10%	15.70%

Source: MICS 2017-18

3.1.1 Low Universal Health Coverage (UHC)

Pakistan is focused on achieving Universal Health Coverage (UHC) for all citizens by 2030 with a vision that everybody should have access to affordable and quality essential health services in the country. As defined by World Bank (WB) and World Health Organization (WHO), four groups for UHC monitoring, which are service capacity and access, reproductive, maternal, newborn, child and adolescent health and nutrition, non-communicable diseases, and infectious diseases.



Universal Health Coverage is the main outcome of health-related SDGs and is measured with two targets, one for coverage of essential service delivery (3.8.1) and other for financial protection (3.8.2). As per UHC Service Coverage Index, Layyah is performing well as compared to other districts, however below half of the population in Layyah district has access to essential health services/ universal health coverage, which is far from the global UHC Service Coverage Index

target of 80+ by 2030. The other three districts in D.G Khan division are the worst performing districts.

Table 13: District-level UHC Service Coverage Index 2021

	D.G. Khan	Layyah	Muzaffargarh	Rajanpur
UHC Service Coverage Index 2021	46.19%	48.69%	43.37%	41.25%
Ranking in Punjab	32	22	35	36

Source: Pakistan 2021 Monitoring Report Universal Health Coverage

3.1.1 Accessibility and quality of health facilities

There is a need to increase the service delivery in geographically poorer areas, to mitigate incidence of poverty. One of the major challenges faced by the region is that infrastructure is incomplete, and equipment are missing or non-functional. The existing capacity of health facility is demonstrated by beds to population ratio, which is a WHO indicator.

The figure below shows required beds in some of the health facilities of the region, which is calculated by dividing the number of beds in the facility by its catchment population. Since the introduction of Millennium Development Goals (MDGs), it was identified that almost half of under-five deaths were in the neonatal period, thus led to focus on Maternal, Newborn, and Child Health (MNCH) and Reproductive, Maternal, Newborn, and Child Health + Adolescent health (RMNCH+A) to underline the crucial importance of reproductive health. However, mother and child healthcare indicators in D.G Khan and Rajanpur are worst off, since only 43.8% and 40.3% of the deliveries in the region were attended by a skilled person which is less than SDG 2030 target of 80%. Similar is the case for Muzaffargarh and Layyah.

Table 14: WHO-Recommended 4 ANC Visits, Birth Attended by Skilled Personals and Beds Per 1000 Population

Indicators	WHO-recommended 4 Antenatal visits	Births Attended by Skilled Personals	Beds per 1000 population
Minimum threshold	 100%	 80%	 2:1000
Province Average	52.9	76.4	0.66
D.G Khan	36.3	43.8	0.5
Layyah	44.5	68.1	0.5
Muzaffargarh	37.5	52.8	0.4
Rajanpur	27.2	40.3	0.3

Source: MICS 2017-18

3.1.1 High Prevalence of Disease

The poor quality of drinking water in D.G Khan poses a substantial risk to the health of the community. The presence of contaminants, pollutants, and high levels of harmful uranium substances in the drinking water supply has raised serious concerns about public health. Resultantly, a large number of individuals are experiencing increased cancer risk, kidney damage and reproductive issues. The table below shows that below 50% of households having basic drinking water, sanitation, and hygiene services in Muzaffargarh, Rajanpur and D.G Khan. The district Layyah has 62.2% access to basic drinking water, sanitation and hygiene services.

Table 15: Percentage of Household Having Basic Drinking Water, Sanitation and Hygiene Services

#	Districts	% of HH having basic drinking water, sanitation, and hygiene services
1-	D.G Khan	44.0
2-	Layyah	62.2
3-	Muzaffargarh	45.4
4-	Rajanpur	36.9
	Punjab	64.8

Source: MICS 2018

The overall division faces significant challenges regarding access to safe drinking water, impacting the health and well-being of the people. Many areas, particularly rural regions, suffer from inadequate water supply infrastructure, leading to reliance on unsafe and contaminated water sources. This situation contributes to the prevalence of waterborne diseases, further exacerbating health issues in the districts. Efforts to improve water quality and access, such as developing and maintaining water supply systems and promoting water purification practices, are crucial for

enhancing public health and ensuring the division's sustainable development.

3.1.2 Poor Condition of existing facilities

Overcrowding, unplanned or missing infrastructure and deteriorating infrastructure are some of the major challenges faced by the existing health facilities in D.G Khan division. Following figure highlights the observations from the field:

3.2 Spatial Mapping of Uncovered Areas

The D.G Khan division lies in the region of Punjab. The geo-tagged locations of health facilities in the region are spatially mapped for further analysis. The current model of Punjab health system includes at least one BHU at 24/7 each UC, while RHC is established on cluster of BHUs. Moreover, one DHQ is established at each district and one THQ at each tehsil. Factors such as geographic spread, low population density, limited infrastructure, and higher costs for delivering rural and remote health care create challenges for healthcare system. With increasing population of the region, there is increasing amount of pressure on existing health infrastructure network. In this section, travel time analysis has been used to quantify populations' physical accessibility to healthcare infrastructure and identify the areas which are covered and not covered by the health services. The travel time analysis is displayed in the maps below.

3.2.1 Uncovered areas for BHU services

Basic Health Unit (BHU) are the lowest level of the health system. Every rural Union Council or District Council should have a BHU facility and it serves to a catchment population of 10,000 to 25,000.

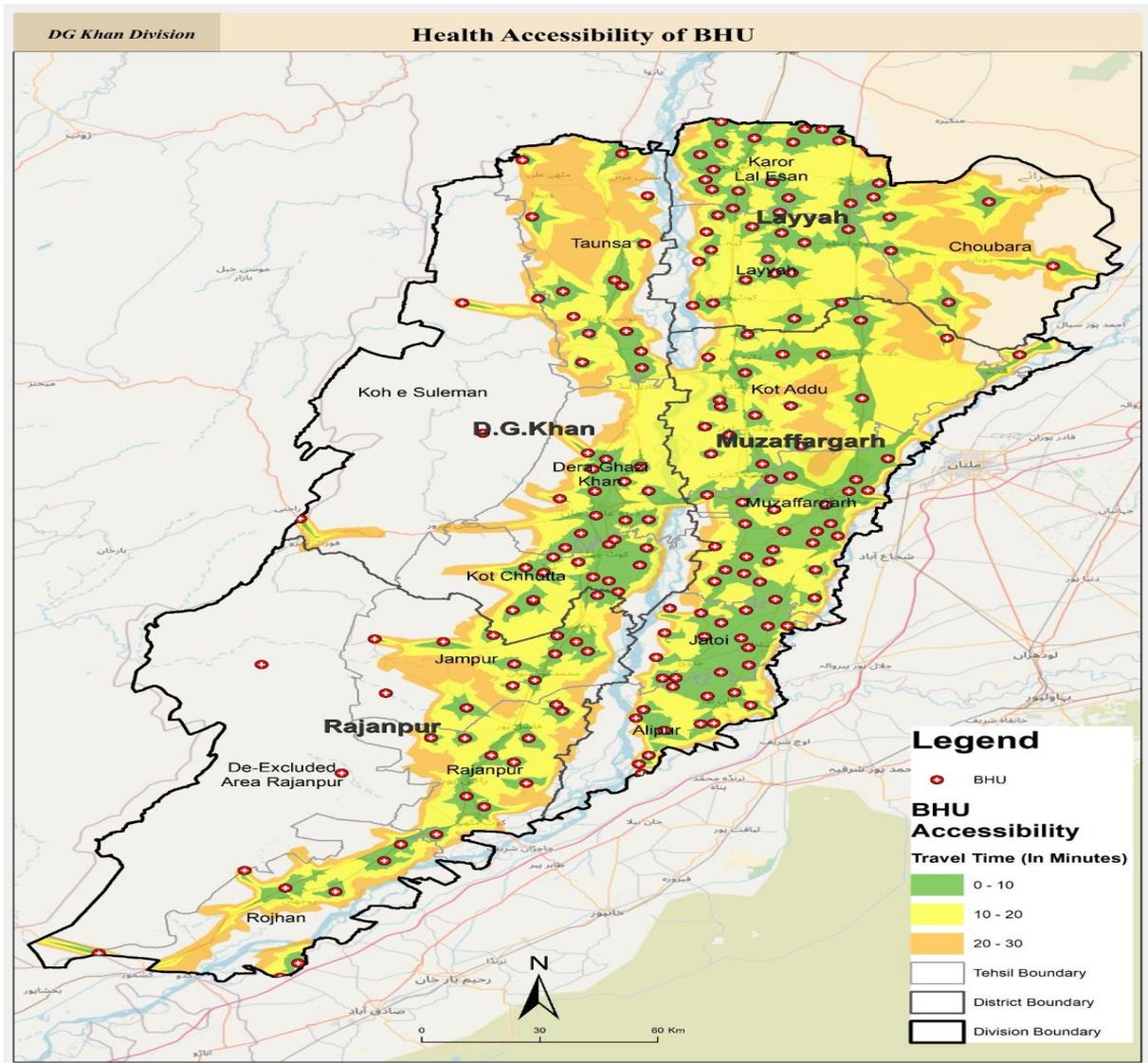


Figure 4: Health Accessibility of BHU in D.G Khan division

The map illustrates BHU accessibility in D.G Khan division: green for quick access within minutes, yellow for moderate access in 10-20 minutes, and orange for longer access in 20-30 minutes. We can see that most of BHUs are available only 0-10 minutes travel time.

D.G Khan division has four districts. In D.G Khan district, with 375619 population have been unserved for health facilities and about 72 UCs have no BHUs that are Barti, Mithwan, Mubarki, Theekar, Tuman Leghari (Zareen), Ahmadani, Basti Khosa, Basti Ranjha, Bela, Chabri Bala, Chak Nao Abad, Chak Ramin, Churhatta Pajadh Janubi, Churhatta Sindh Janubi, Churhatta Sindh Shumali, Dagar Chit, Darahma, Dho, Fareed Abad, Gadai Gharbi, Gadai Sharqi, Gadai Shumali, Ghanta Ghar Gol Bagh (Block No 39), Ghazi Park, Haji Ghazi Gharbi, Kala, Khayaban-e-Sarwar, Marhatta, Mehboob Abad, Model Town, Muslim Town / Shakir Town, Nizam Abad, Old Ghala Mandi, Paigah Chak No.2, Paigah Chak No.3, Pakki, Patti Satai, Peer Qatal, Rukn Abad/Shakoor Abad, Sabra Nacha, Shadan Lund Chak Danda, Shah Sadar Din, Shero Dasti, Tibbi Kharik, Urban 5, Pathar Bazar, Basti Fauja, Basti Malana, Chak Dodarah, Choti Bala, Darkhast Jamal Khan Dermiyani, Darkhast Jamal Khan Gharbi, Darkhast Jamal Khan Janubi, Haider Qureshi, Haji Kamand, Hazara, Jalbani, Khanpur Janubi, Kotla Ahmad Khan, Nawan Shumali, Notak Maheed, Shakhi Sarwar Gharbi, Shakhi Sarwar Sharqi, Babbi, Basti Buzdar, Bohar, Jhoke Bodo, Kotani, Nutkani, Panjgrain, Tibi Qaisrani, Vehova Chak Janubi, Vehova Chak Shumali.

In Muzaffargarh district, 319700 people remained unserved because UCs that don't have BHUs are; Bait Mulan Wali, Baz Wala, Damar Wala Janubi, Khairpur Sadat, Misan Kot Bhowai, Seet Pur Khanani, Yakey, Bair Band, Bakani, Binda Ishaq, Damar Wala Shumali, Jhalareen, Jhugi Wala, Khaltee, Sabay Wala, Alurid, Bait Qaim Wala, Chaudhary, Darigh, Dibbi Shah, Dogar Kalasra. Dona, Ghazi Ghat, Gujrat, Gurmani Sharqi, Hinjrai, Mir Pur Bhagal, Noor Shah, Patti Ghulam Ali, Sadiq Abad, Shadi Khan Munda, Zulfiqar Abad, Ahmad Mohana, Alidaha, Barahim Wali, Bhutta Pur, Ghanzanfar Garh, Gul Qaim Mastoi, Gul wala, Hassan Pur Kacha, Hassan Pur Trund, Jarh, Jhanday Wali, Mahal Khakhi, Mahar Pur, Manik Pur, Nohan Wali Rangpur, Roheelan Wali, Shah Jamal, Waan Pitafi.

Moreover, in district Layyah, about 83712 people are lived in unserved areas where they don't have access to BHUs, 12 missing UCs exist in Layyah are; Chak No.452 TDA, Chak No.112 ML, Chak No.98 ML, Shoukat Abad, Chak No.393 TDA, Kot Sultan City, Layyah Thal Jandi, Mirhan, Pahar Pur, Peer Jaggi Sharif, Sarishta Thal, Sohara Wasava. In Rajanpur district 245431 people are lived in unserved areas where they don't have access to BHUs, 40 missing UCs exist in Rajanpur are;

Allah Abad Sharqi, Basti Miran, Basti Rindan, Bolley Wala, Burrary Wala, Dajal, Hairo, Harrand, Kot Janu, Lalgahor Lundi Saidan, Muhammad Pur No. 1, Muhammad Pur No.2, Naushehra Gharbi, Nawan Begraj, Noor Pur Manjho Wala, Rakh Azmat Wala, Rustam Lighari, Tatar Wala, Thul Ali Muhammad, Tufki, Asni, Bait Sauntra/Tung, Chak Shikari, Deehgan, Kotla Khan Muhammad, Kotla Rubait/Chak Lasa, Naushera Sharqi, Rakh Kot Mithan, Sikhani Wala, Wang, Baily Shah, Bangle Hidayat, Chak Dilbar, Chak Mut, Gainmal, Kacha Chohan, Kacha Mian Wali, Kacha Razi, Sabzani, Shah Wali.

3.2.2 Uncovered areas for RHCs services

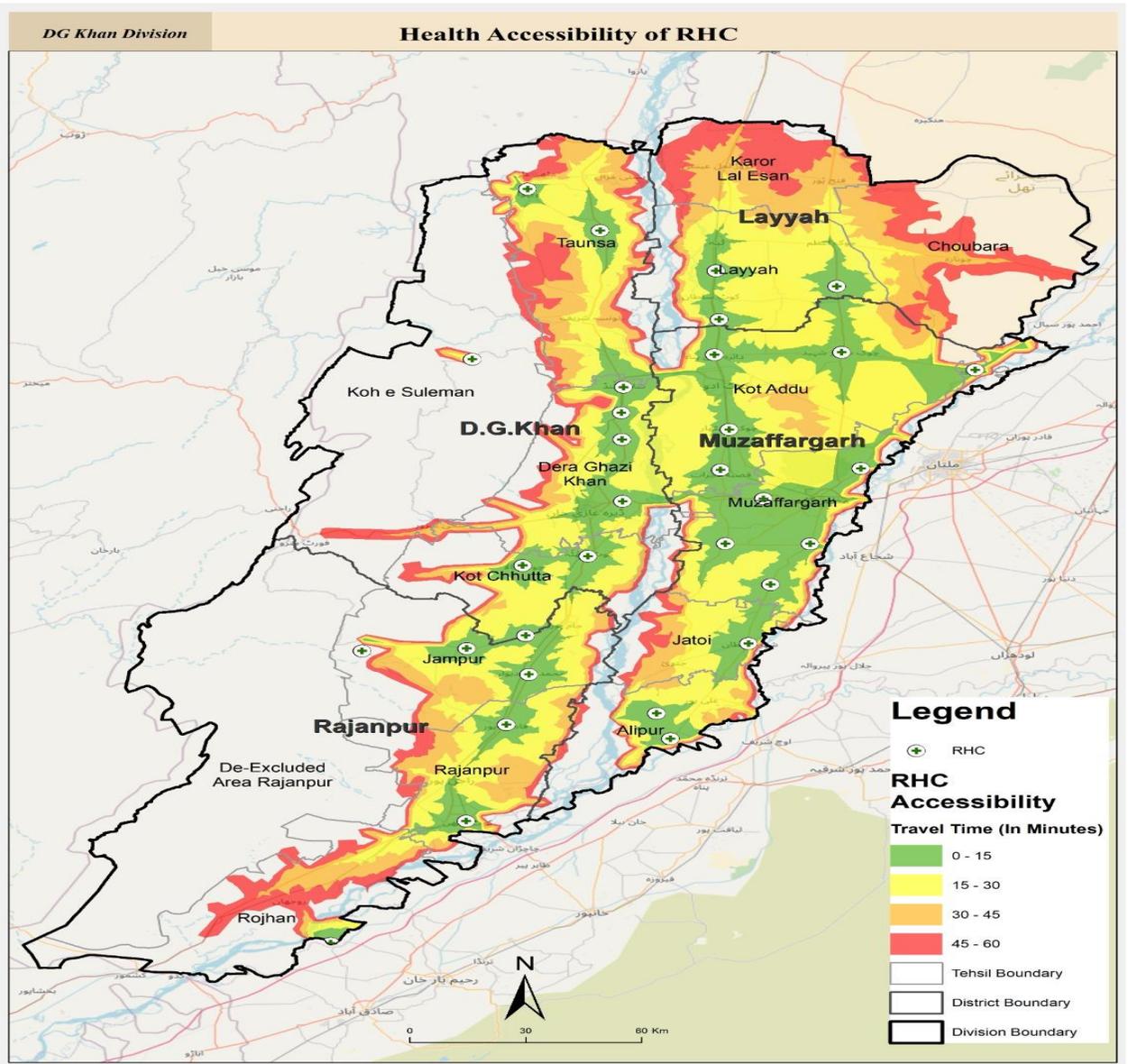


Figure 5: Health Accessibility of RHC in D.G Khan Division

3.2.3 Uncovered areas for RHCs services

The above map shows the number of RHCs in D.G Khan division. In D.G Khan district, 9 RHCs exists and 317589 People are lied in unserved areas. In district Muzaffargarh, there are 13 RHCs and almost 286851 population live in unserved areas means they don't have access to RHCs. Whereas in Layyah district, 6 RHCs are there with 159237 people being living in unserved areas.

The Rural Health Centers (RHCs) are vital for providing basic healthcare services, particularly in the D.G. Khan division. Since most RHC facilities are within a 15-minute travel time, a large portion of the population can easily access these healthcare hubs. Nevertheless, the need for more RHC-level health facilities is evident, highlighting the need for increased healthcare access to better serve the community. This includes projects like renovating current RHCs, building new ones, and enhancing staffing and infrastructure to address medical needs beyond maternity care. Additionally, enhancing transportation infrastructure, particularly by improving 1122 SOP for pick and drop patients, can make it easier for patients to access these vital resources.

3.2.4 THQs Services

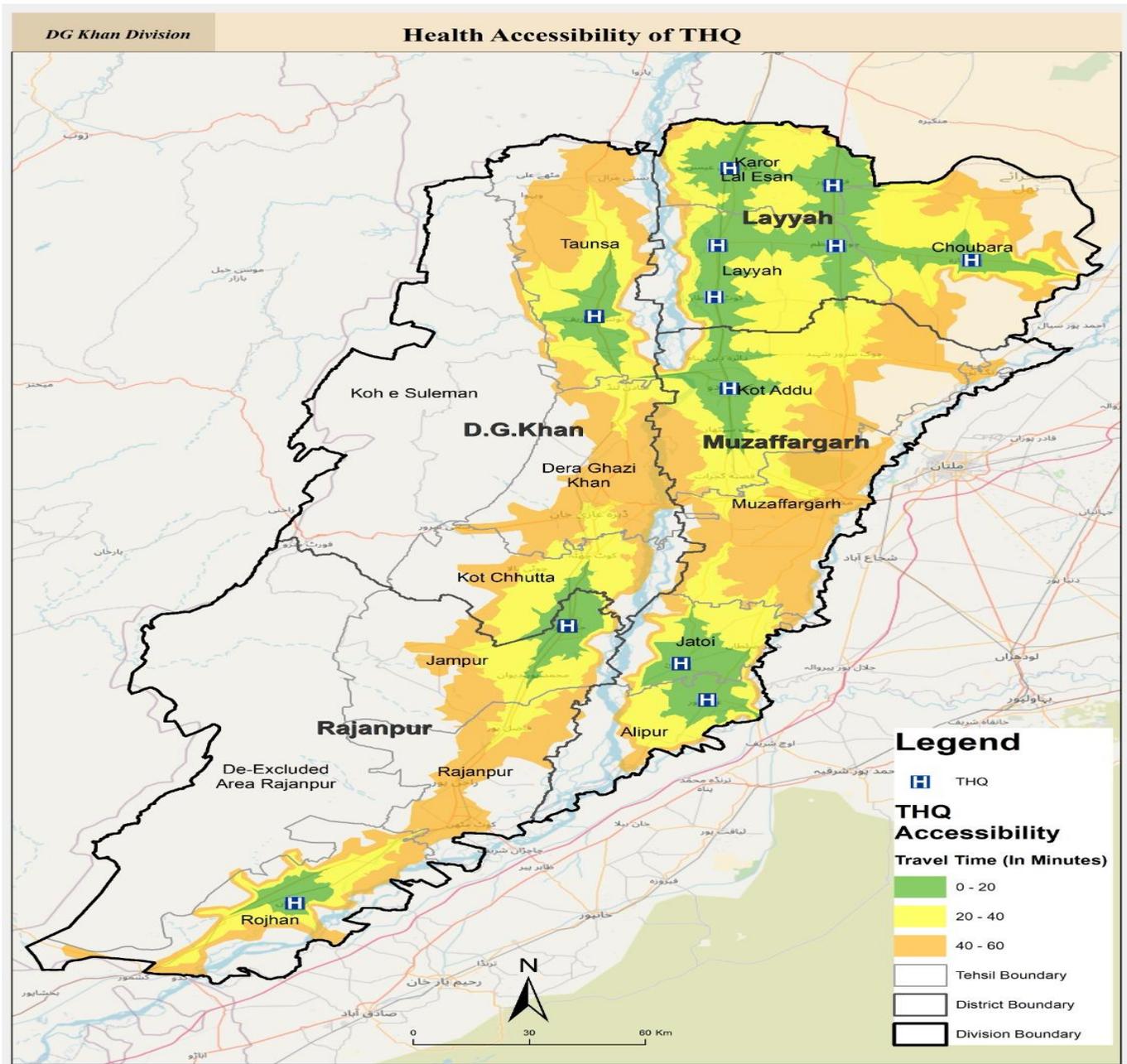


Figure 6: Health Accessibility of THQ in D.G Khan Division

In the D.G Khan district, there are two Tehsil Headquarters (THQs) with an unserved population of 2275959 lacking access to healthcare facilities. Meanwhile, in Muzaffargarh district, there are four THQs, and 415254 individuals are without adequate healthcare services. Additionally, Layyah district has two THQ, serving an unserved population of 78251 in terms of healthcare access. Rajanpur district has two THQs, serving an unserved population of 402275 in terms of inadequate

healthcare access. The map provided highlights areas where travel time exceeds 20 minutes, indicating regions where access to healthcare facilities is beyond the recommended range. This underscores the urgent need to address the gap in healthcare infrastructure and ensure that all residents have timely access to essential medical services.

3.2.5 DHQs Services

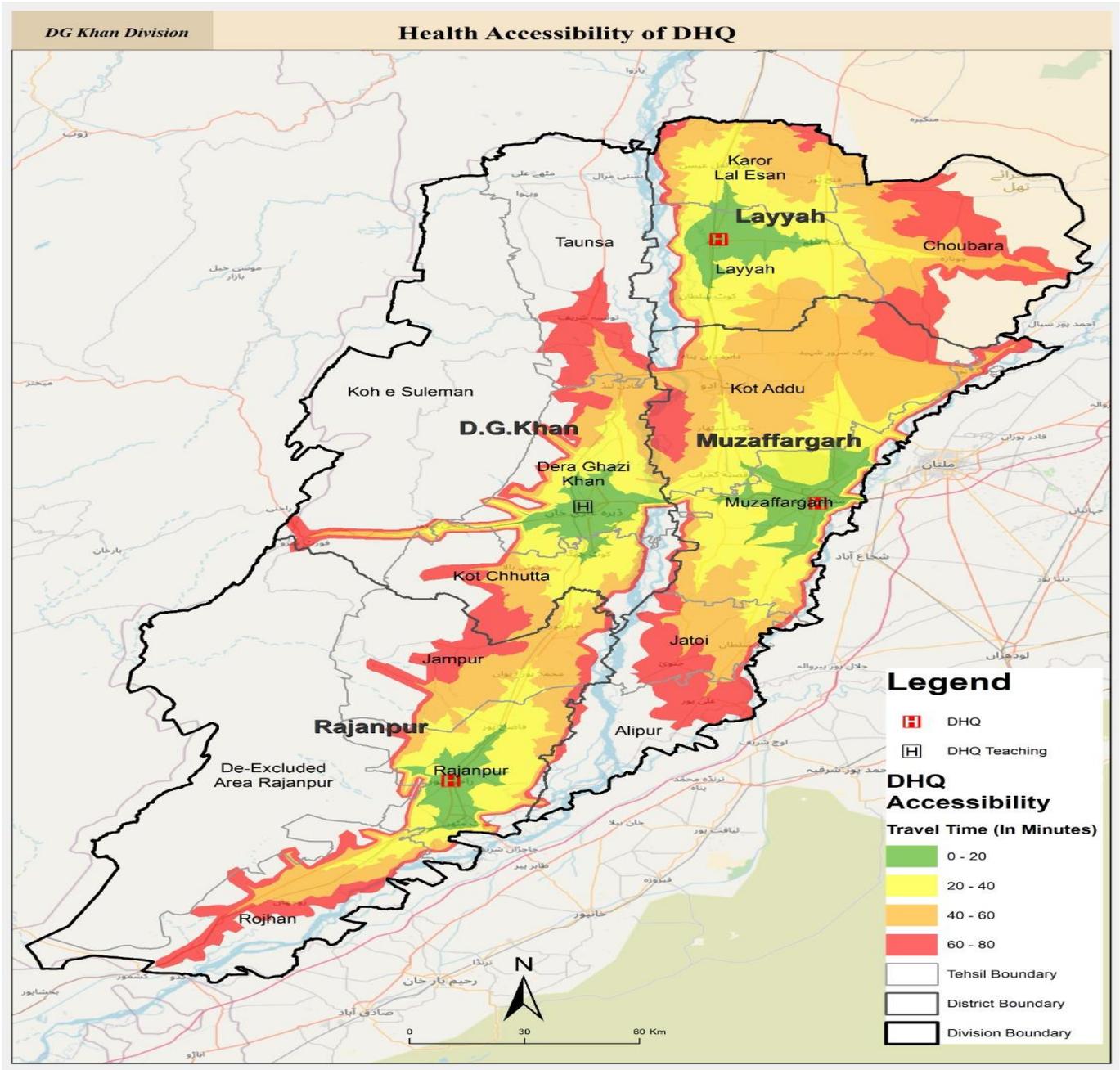


Figure 7: Health Accessibility of DHQ in D.G Khan Division

The map provides insight into the distribution of District Headquarters (DHQs) across the four districts of the D.G Khan division. In Muzaffargarh, Layyah, and Rajanpur districts, each has one DHQ in operation. However, in D.G Khan district, there is no DHQ, the district functions a teaching hospital. Consequently, a significant population remains underserved in D.G Khan, totaling 671428 individuals, while in Muzaffargarh the unserved population stands at 546705. Additionally, Rajanpur and Layyah have 348859 and 95224 people residing in areas lacking access to healthcare facilities respectively.

Chapter 4: Way Forward and Proposed Interventions

Proposed Areas of Intervention

Recommended Interventions for the Health Sector (Rs. 5384 MILLION)	
TYPE	INTERVENTION
Infrastructure (Boundary Wall, Emergency Block Medicine Store Warehouse, DHO Office)	Construction of boundary wall is essential for ensuring the safety, security, and privacy of patients and staff. Emergency block and medicine warehouses are crucial for providing immediate medical care and ensuring the availability of essential medications for patient's treatment <i>68 facilities, Rs. 2412 Million</i>
Infrastructure (Improvement of Sewerage system)	Improving sewerage systems in health facilities is essential for safeguarding public health, preventing infections, and ensuring the provision of safe, high-quality healthcare services <i>41 facilities, Rs.82 Million</i>
Provision of Equipment and Machines	Provision of ultra sound machines enhances diagnostic capabilities, enables point-of-care diagnosis, and guides medical procedures <i>71 units, Rs. 191.5 Million</i>
Provision of Ambulance Service	Ambulance service is an integral component of a health facility's operations, providing emergency response and patient transportation <i>90 facilities, Rs. 180 Million</i>

Table 16: Short- Term to Medium Term Proposed Projects

Sr No.	Total purposed Projects Cost= 5384 (PKR Million)	Status	Tentative Cost	Location
1	Construction of DHO office District Health Authority D.G Khan	Medium Term	155.5	D.G Khan
2	Re construction of old buildings of RHC block at RHC Choti Zarin	Short to Medium Term	182	D.G Khan
3	Construction and repair of 3 boundary walls in Rajanpur, 3 in D.G Khan at RHC level	Medium Term	123.5	Rajanpur & D.G Khan
4	Improving sewerage system in 4 RHCs in Rajanpur	Short to Medium Term	8	Rajanpur
5	Improving sewerage system in 14 BHUs in Muzaffargarh, 10 in D.G Khan and 13 in Rajanpur	Medium Term	74	Muzaffargarh, D.G Khan & Rajanpur
6	Construction and repairment of 9 Boundary walls in Muzaffargarh, 27 in D,G Khan and 19 in Rajanpur at BHU level	Short to Medium Term	1133	Muzaffargarh, D.G Khan & Rajanpur
7	Reconstruction of BHU Bakkhar wah district D.G Khan	Medium Term	71.5	D.G Khan
8	Provision of 29 ambulances in Muzaffargarh, 25 in D.G Khan, and 10 in Rajanpur at BHU level	Medium Term	128	Muzaffargarh, D.G Khan & Rajanpur
9	Provision of 13 ambulances in Muzaffargarh, 6 in Layyah, 3 in Rajanpur and 4 in D.G Khan at RHC level	Short to Medium Term	52	All Districts
10	Construction of CEO office District Health Authority Layyah, Rajanpur & Muzaffargarh and medicines warehouse for DHA Muzaffargarh	Medium Term	650	Layyah
11	Upgradation of BHU Kotla Lal Shah to RHC level in Tehsil Jatoi district Muzaffargarh	Short to Medium Term	130	Muzaffargarh
12	Extension in Emergency block at DHQ and THQ Hospital (Kot Sultan) Layyah	Medium Term	350	Layyah
13	Establishment of 20 bedded MCH ward and provision of missing facilities at THQ Fateh Pur	Medium Term	150	Layyah
14	Establishment of 50-Bedded Mother & Child Hospital at Alipur Tehsil Muzaffargarh	Medium to Long Term	1100	Muzaffargarh
15	Up-gradation of RHC Rohillanwali into THQ Level Hospital District Muzaffargarh	Medium to Long Term	200	Muzaffargarh

16	Up-gradation of BHU Ghaghri to RHC level Tehsil Alipur District Muzaffargarh	Medium to Long Term	130	Muzaffargarh
17	Provision of mobile health diagnostic facilities at BHUs in tribal areas	Medium to Long Term	450	D.G Khan
18	Provision of 38 ultrasound at BHU level in Muzaffargarh	Short to Medium Term	102.5	Muzaffargarh
19	Provision of 17 ultrasound machine in D.G Khan, 7 in Layyah and 9 in Rajanpur at BHU level	Medium Term	89	D.G Khan, Layyah & Rajanpur
20	Establishment of Sehat Sahulat Ghar RD Muhammad Mosa, RD Peer Kamal Tehsil, RD Merrani and RD Urrla UC Langer Wah Mouza Missan Kot Boha Tehsil Alipur, Basti Chah Maseet Wala Mouza Rakh Khanpur Tehsil, SHC Kalar Wali and RD Sheikh Ali Tehsil Jatoi	Medium to Long Term	105	Muzaffargarh

The proposed are designed to respond to pressing problems in the existing health system of D.G Khan division. It will include improving the quality of services delivery through construction of missing wards, provision of missing services and equipment in health facilities, etc.

Way Forward

1. Security Challenges

- GB Security Company is providing services in 31 hospitals of Tehsil Taunsa. This should be replicated in all other hospitals, especially in no-go and tribal areas.

2. Mobile Health Units

- Mobile health units are the most suitable option in tribal and no-go areas

3. Supply of Medicine

- All hospitals in DG Khan are facing a shortage of medicine. This issue needs to be resolved on priority basis

4. Availability of Clean Drinking Water

- Water filtration systems should be installed on hospital premises and in community localities. This can reduce many local diseases.

5. Services for Staff

- Staff residences are required in remote tribal areas.
- Security should be provided for female staff.
- Transportation facilities for picking up and dropping off medical staff are needed.

6. Preventive Measures

- A substantial budget should be included in the upcoming healthcare projects for preventive measures and awareness campaigns through hospitals, schools, or other public entities

7. Container Based Hospital Infrastructure

- Construct flood resistant hospital like container-based hospitals (BHUs or RHC