

Chapter-4

Health Sector

Sahiwal Regional Development Plan

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Chapter 1: Introduction

The Sahiwal division comprises Sahiwal, Pakpattan and Okara districts. The Sahiwal Division is surrounded by the Faisalabad Division to the west, the Lahore Division to the north, the Bahawalpur Division and India to the east, and the Multan Division to the south. Approximately 18 miles (29 km) southwest of Sahiwal lies Harappa, an ancient city of the Indus Valley Civilization. As per the 2017 census, the population of Punjab is 110 million, with a growth rate of approximately 2.53%. Around 63.14% of the population resides in rural regions, while 36.86% resides in urban areas within Punjab. The district of Okara has the highest population among the other districts in the region. The population of Okara district is approximately 3 million, with Sahiwal coming next, home to 2.5 million people, followed by Pakpattan, with a population of 1.8 million.

Health plays a crucial role in human development and greatly influences social advancement. Investing in the health of a community is vital for improving the productivity of the workforce by enhancing their physical capabilities, which encompass strength and endurance. The health care system comprises of private, public, and semi-government hospitals in all three districts of Sahiwal. However, the whole division suffers from high disparity in terms of health with relatively low performance on the major health indicators like infant mortality rates, antenatal care, number of doctors etc. Multiple factors contribute to poor healthcare status of the division such as low accessibility to health care services, low quality of services at primary health facilities, missing services at secondary facilities, poor emergency & waste management towards and infrastructure development.

Despite efforts to enhance healthcare services in the Sahiwal division, numerous challenges persist within the healthcare system, including unequal access to healthcare services. Rural areas within Sahiwal division often lack adequate healthcare infrastructure, including hospitals, clinics, and medical professionals. This results in limited access to healthcare services for many residents, particularly those living in remote or underserved areas.

Table 1: Health Facility in Sahiwal Division

Facility type		Health Facilities in Sahiwal Division			
		Sahiwal	Pakpattan	Okara	Total
Hospital	NO.	9	4	6	19
	Beds	1135	215	549	1899
RHCs	NO.	13	5	10	28
	Beds	220	100	200	520
BHUs	NO.	81	55	97	233
	Beds	152	110	194	456
Dispensaries	NO.	29	12	27	68
	Beds	0	0	0	0
MCH centers	NO.	6	2	11	19
	Beds	0	0	0	0
T.B Clinics	NO.	0	1	1	2
	Beds	0	0	0	0
Trauma centers	NO.	0	0	0	0
	Beds	0	0	0	0

Source: Punjab Development Statistics (PDS) 2022

In Sahiwal Division, there is a comprehensive network of health facilities catering to the healthcare needs of the population. The division comprises 19 hospitals, 28 Rural Health Centers (RHCs), 233 Basic Health Units (BHUs), 68 dispensaries, 19 Maternal and Child Health (MCH) centers, and 2 Tuberculosis (T.B) clinics. These facilities are distributed across Sahiwal, Pakpattan, and Okara districts, ensuring accessibility to healthcare services for residents in urban and rural areas.

Regarding bed capacity, the health facilities in Sahiwal Division offer a total of 3875 beds. Hospitals contribute the most to this capacity with 1899 beds, followed by RHCs with 520 beds, BHUs with 456 beds, and dispensaries without any designated beds. Although Maternal and Child Health (MCH) centers and Tuberculosis (T.B) clinics also play crucial roles in healthcare delivery, they do not provide inpatient services, thus not having any beds. Overall, this distribution of beds reflects the division's efforts to provide adequate infrastructure to address various healthcare needs effectively.

The following tables present essential health performance indicators obtained from the PSLM 2020 and MICS 2019 reports. Utilizing data from these sources enables us to conduct a comparative analysis of performance across the three districts of the Sahiwal division: Pakpattan, Sahiwal, and Okara. Cells highlighted in red within the table signify sectors that are underperforming and underutilized compared to the other two districts. Green-colored cells indicate superior overall performance in the Sahiwal division, while yellow cells represent lower performance rates compared to one city and better performance compared to the other.

Table 2: Disease Prevalence in Sahiwal Division and in its Districts

<i>Indicator</i>	Categorization	Punjab	Sahiwal	Pakpattan	Okara
Percentage of Children Aged 12-23 Months That Have Been Immunized (based on recall) At least one immunization	Urban	99	100	100	100
	Rural	98	100	99	100
	Total	98	100	99	100
Percentage of Children Aged 12-23 Months That Have Been Immunized	Urban	81	82	78	74
	Rural	81	84	73	86
	Total	81	84	73	83

(BASED ON RECORD) - FULLY IMMUNIZED					
Percentage of Children Aged 12-23 Months That Have Been Immunized	Urban	88	82	78	74
	Rural	89	87	74	87
	Total	89	87	75	84
(C: BASED ON RECALL AND RECORD) - FULLY IMMUNIZED					
Percentage of Children 12-23 Months That Have Been Immunized	BCG	87	87	83	94
	PENTA1	86	87	77	86
	PENTA2	84	86	76	83
	PENTA3	84	86	75	83
Percentage of Children 12-23 Months that have been Immunized. BY TYPE OF ANTIGEN-BASED ON RECORD AND RECALL 5	BCG	96	89	85	95
	PENTA1	95	90	78	88
	PENTA2	92	88	77	84
	PENTA3	92	88	76	84
	PNEU1	94	88	76	85
	PNEU2	92	88	76	84
	PNEU3	91	88	76	84
	POLIO1	94	89	76	84
POLIO2	92	89	76	84	

Percentage of Children 12-23 Months That Have Been Immunized DONE 4	POLIO3	90	88	75	84
	MEASLES	91	88	75	85
	BCG	87	87	83	94
	PENTA1	86	87	77	86
	PENTA2	84	86	76	83
	PENTA3	84	86	75	83
	PNEU1	85	86	75	84
	PNEU2	84	85	75	83
	PNEU3	83	85	75	83
	POLIO1	87	88	75	84
	POLIO2	83	86	74	83
	POLIO3	82	85	74	83
	MEASLES	83	85	74	84

Source: MICS 2017-2018, PSLM: 2020

The table shows that certain areas in Punjab, such as Pakpattan and Okara, are reporting higher incidences of sickness or injury compared to the Punjab average. Moreover, specific rural areas within these districts demonstrate comparatively lower rates of child immunization, both based on records and recall. These findings provide valuable insights for implementing targeted health interventions and policies aimed at improving healthcare access and immunization coverage in areas where it is most needed.

Table 3: Mother and Child Care Parameters

<i>Indicator</i>	<i>Categorization</i>	Punjab	Sahiwal	Pakpattan	Okara
Percentage Distribution of Population Fallen	Sick or injured	6.79	6.46	6.00	5.72

Sick or Injured During Last	Health Consultation	96.37	97.82	95.53	97.20
Children Under 5 Suffering from Diarrhea in Past 30 Days (D2)	URBAN	5	10	7	6
	RURAL	6	10	9	8
	TOTAL	6	10	9	8
Treatment of Diarrhea in Children Under 5 Years where Practitioner was Consulted (d3)	URBAN	89	100	100	100
	RURAL	90	94	92	94
	TOTAL	90	95	93	95
Treatment of Diarrhea in Children Under 5 Years where ORS was given to child (d4)	URBAN	73	66	80	100
	RURAL	77	70	83	71
	TOTAL	76	70	83	76
Percentage with comprehensive HIV knowledge - Women		4.3	5.6	2.9	2.6
Percentage with comprehensive HIV knowledge – Men		9.4	10.1	5.3	6.1

Source: MICS 2017-2018, PSLM: 2020

The table 3 provides a snapshot of health indicators in different districts of Punjab, Pakistan, including Sahiwal, Pakpattan and Okara. Notably, the percentage distribution of the population fallen sick or injured during their last health consultation is consistently lower in Okara (5.72%) compared to Punjab (6.79%), suggesting relatively better health conditions in Okara. However, Sahiwal has a higher percentage of people falling sick or injured (6.46%), which is worse than the Punjab average. In terms of the treatment of diarrhea in children under 5, Sahiwal also exhibits a lower rate of ORS (Oral Rehydration Solution) usage (70%) compared to Punjab (76%), indicating a slightly worse outcome in terms of treating diarrhea in young children in Sahiwal. Overall, while some districts show better health indicators than the Punjab average, Sahiwal and Pakpattan stands out with comparatively worse figures in these specific areas.

Table 4: Family Planning Indicators

<i>Indicator</i>	<i>Categorization</i>	Punjab	Sahiwal	Pakpattan	Okara
Pregnant Women that have received Tetanus Toxoid Injection as % of Pregnant Women (m1)	Urban	87	95	92	80
	RURAL	82	84	85	90
	TOTAL	83	86	86	87
Percentage of women currently married who are using no method		65.6	60.1	62.5	71.6
Percentage of women currently married who are using any method		34.4	39.9	37.5	28.4
Unmet need for family planning		17.8	12.2	15.8	17.4
Met need for family planning (currently using contraception)		34.4	39.9	37.5	28.4
Total demand for family planning		52.2	52.1	53.3	45.8
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	6.9	3.7	7.6
Percentage of women who received at least 2 tetanus toxoid containing vaccine doses during the pregnancy of the most recent live birth		69.7	82.8	72.1	73.3
Delivery in health facility (public / private)		73.3	80.2	68.6	70.6
Post-natal health check	for the newborn	69.6	78.0	76.1	74.3
	for the mother (In facility or at home)	70.1	80.3	77.0	74.6

Source: MICS 2017-2018, PSLM: 2020

The above table represents a range of important health indicators in all districts of Sahiwal division, including Sahiwal, Pakpattan and Okara. Notably, when compared to the Punjab average, several indicators show differences. In Sahiwal division, Sahiwal, Pakpattan and Okara indicate a higher percentage of pregnant women received Tetanus Toxoid Injections than the Punjab average of 83%, reflecting better maternal health practices. However, in terms of "Percentage of women currently married who are using no method, Okara stands out with a relatively higher percentage (71.6%), which is worse than the Punjab average of 65.6%, suggesting a potentially higher unmet need for family planning in Okara. This data underscores variations in health indicators across these districts, with Okara 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 three districts of Sahiwal division: Sahiwal, Pakpattan and Okara. Notably, the percentage of people seeking advice or treatment for diarrhea from public health facilities varies significantly among the districts, with Sahiwal having the highest at 18.4%, while Okara has the lowest at 11.5%. Conversely, the percentage of individuals seeking care from private health facilities is highest in Sahiwal (44.9%) and lowest in Okara (38.1%). It's important to highlight that Pakpattan has the highest percentage (30.1%) 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

		Sahiwal	Pakpattan	Okara
Advice or treatment was sought from	Public HF (%)	18.4	14.6	11.5
	Private HF (%)	44.9	43.6	38.1
No advice or treatment sought		16.5	30.1	19.6
HH satisfaction level by BHUs		73.68	87.15	94.46

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 Sahiwal and the required beds per population as per the National Reference Manual on Planning and Infrastructure Standards.

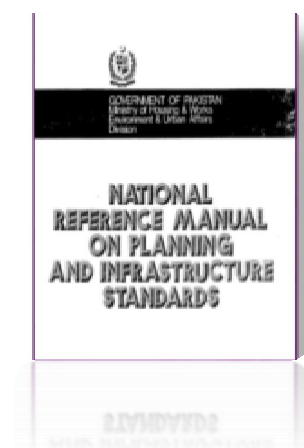


Table 7: Required Beds as Per Standards for Health Facilities

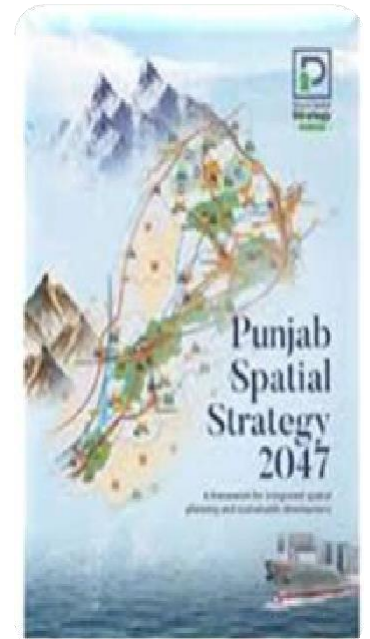
Districts	Population (Census 2023 - million)	Existing Beds (PDS 2022)	Beds per 1000 population	Population projection 2021	Required beds per population (2021)
Sahiwal	2,881,811	1507	0.5	3,230,397	0.5
Pakpattan	2,136,170	425	0.2	2,436,989	0.2
Okara	3,515,490	943	0.3	3,967,763	0.2
Total	8,533,471	2875	1	9,635,149	0.9

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 Sahiwal division, the districts Pakpattan, Okara and Sahiwal 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 11 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:

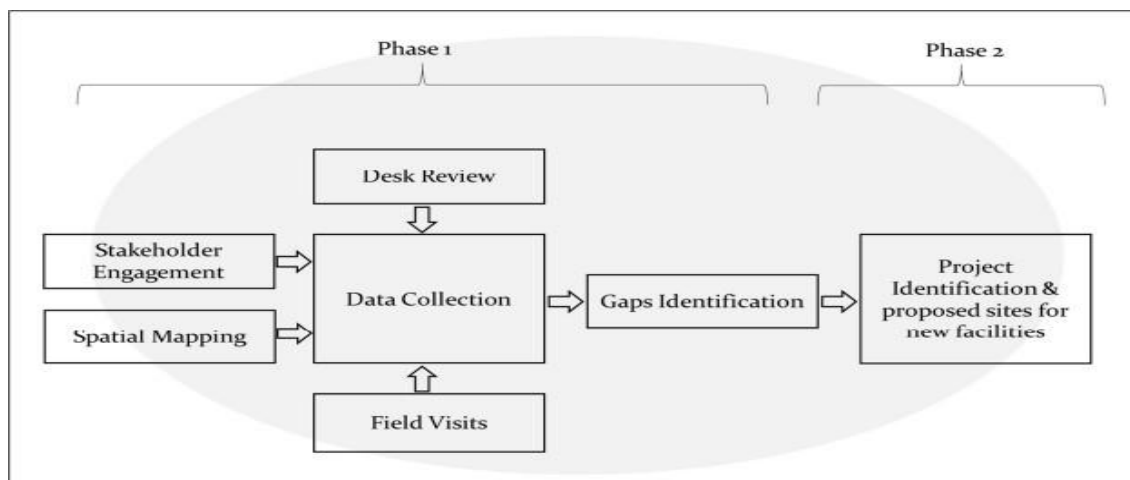


Figure 1: Methodological Framework

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 figure below highlights the framework for analyzing major health indicators at different stages of life course, which gives an opportunity to explore the influencing factors on Mother and Child Health (MCH). At each point in the life course different services are required, for instance outpatient and outreach services can promote behavior change and provide preventive care, while hospital or clinical care can provide services such as emergency obstetric care and care for small and sick newborns at large scale. This results in a matrix of integrated packages involving different types of care and the impacting health indicators at various points in a woman' 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)
	4 th Highest among all division of Punjab	1 st Lowest among all division of Punjab	6 th Highest among all division of Punjab	7 th Highest among all division of Punjab	4 th Highest among all division of Punjab
	(13.8) Low performing district (among Sahiwal division): Pakpattan	(0.5) Low performing district (among Sahiwal division): Pakpattan	(76.9) Low performing district (among Sahiwal division): Pakpattan	(73.1) Low performing district:(among Sahiwal division) Pakpattan	(78.4) Low performing district (among Sahiwal division): Pakpattan
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
	6 th Lowest among all division of Punjab	6 th highest among all division of Punjab	5 th Highest among all division of Punjab	3 rd Highest among all division of Punjab	1 th Highest among all division of Punjab
	(9.3) Low performing district(among Sahiwal division): Okara	(15.4) Low performing district (among Sahiwal division): Sahiwal	(48.7) Low performing district (among Sahiwal division): Pakpattan	(75.8) Low performing district (among Sahiwal division): Okara	(73.5) Low performing district:(among Sahiwal division) Okara

Source: MICS 2017-18, National Nutrition Survey 2018

In the area, some indicators like robust immunization coverage, WHO-recommended 4 ANC visits, and post-natal care show notable success. However, significant challenges remain 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, indicating opportunities for improvement. A closer look at the district level reveals that Pakpattan and Okara districts are among the less successful districts across these specified 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 Sahiwal division during January 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), Sahiwal**
- **District Health officer, Sahiwal**
- **Chief Executive Officer (CEO), Pakpattan**
- **District Health officer, Pakpattan**
- **Chief Executive Officer (CEO), Okara**
- **District Health officer, Okara**

assessment of various health facilities in the Sahiwal division in 2024, also met various officials and stakeholder including:



Consultations with stakeholders were conducted for the shared understanding of the prevailing health condition in Sahiwal. 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

District Sahiwal

The detail wise data collect from department are as fellow;

Table 8: Missing Health Facilities in Sahiwal 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	76	154		Medicine Supply, Broad band internet connection	New construction of residencies, ambulance, Boundary wall	Ultra sound
RHC	11	237	Dental HR, Lack of WMO	Medicine Supply, Broad band internet connection	Ambulance, Sewerage system, Lab Machinery need to be updated	Digital X-Ray Machine

DHQ	1	180	House job facility		Ventilator, Autoclave, Operation Theatre Traction Table, Microscope for Laboratory, OT Light for Emergency, image intensifier (C-ARM),	Cardiac monitors, Anesthesia machine, Dialysis Machine, Electric Cautery machine for Emergency and Gynae, Portable X-Ray, CT scan,
THQ	1	140	HR of trauma Center, Nurses, Radiologist	Medicine Supply,	ENT department, Day Care center	Dialysis Machine

Sahiwal Health Sector Issues:

- Changing the Standard Operating Procedure (SOP) for 1122 Rescue Ambulances only facilitate the transfer of patients from first-level hospitals to higher-level of hospitals involves a careful review and adjustment of existing protocols. While often patient cares demand to direct level of hospital emergency treatment.
- The shortage of medicine throughout the Basic Health Units (BHUs) in Sahiwal district is indeed a significant problem that can have serious consequences for the health and well-being of the community.
- The damage to boundary walls at multiple Basic Health Units (BHUs) in Sahiwal District is a serious concern, as it may compromise the security and safety of the healthcare facilities

District Okara

Table 9: Missing Health Facilities in Okara 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
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BHU	91	209	Nurses Staff, Lab technician, Doctors/Surgeon staff, General duties staff, Medical officer	Broad band internet connection, Generator, Solar System, AC, Security	Boundary wall, Ambulance, Sewerage system, Patient Screening, road infrastructure	Ultra sound, Autoclave
RHC	10	197	Medical officer General Duties Staff, lab technician, X-Ray technician	Broad band internet connection, security, Solar system, UPS	Boundary wall, Sewerage system, Ambulance, road infrastructure	X-Ray, Dental unit
DHQ	2	450	House Job facility		MRI, Day Care Center, Waiting area, OPD Registration	Dialysis machine, CT Scan
THQ	3	205	Radiologist & ENT, Ophthalmologist, Pathologist, Consultant Dermatologist,	Lack of funds	Repairment of sewerage system, Extension of pediatrician ward, Day Care center	Cardiac Monitor, Dialysis machine, ENT,

Okara Health Sector Issues

- Lack of medicine storage facility in DHQ south city Okara.
- Stock of drugs should be increase in Rural Health Centers.
- Unpaved or poorly constructed road for most of Basic Health Units create transportation problems for patients
- Boundary wall and Residential quarters issues are also there.
- Labor room in is situated on the third floor, posing potential challenges for gynae patients.
- Wideband internet connection is a critical issue in BHU's and RHC's.
- The sewerage system is in poor condition in some of RHC's.
- The absence of a dispenser and lab technician is notable in RHCs.

- X-ray technician is required in RHC Renala Khurd. Unavailability of physician, surgeon and pathologist in THQ.
- Lack of essential equipment of Orthopedic department in THQ.
- CT scan facility is also not available for patients in DHQ south city.

District Pakpattan

Table 10: Missing Health Facilities in Pakpattan 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	55	132	Nurses staff, Lab technician staff, Doctors/ Surgeon Staff, General duties staff, Medical Officer	Ambulance (for gynae and all patients), security, internet	Generator, Solar System, AC, Boundary wall, Water cooler, Sewerage system	Ultrasound machine
RHC	5	102	Availability of Doctor/ Surgeon Staff	Ambulance (for Gynae and all patients)	Solar System, Availability of condemned item, Delivery tables	Autoclave
DHQ	1	210	Consultant Dermatologist, Nephrologist, Chest Specialist, Radiologist.	Parking area, network upgradation, sewerage repairment	Bob wire, Electric room, Sewerage system	CCTV
THQ	1	150	Consultant Radiologist, Consultant Pathologist		General Store and Medicine Store, Day Care center	

Pakpattan Health Sector Issues

- As (Electronic Medical Record) EMR is based on the Internet and in rural areas internet does not work properly and this makes it difficult for doctors as well as for patients
- Housing quarters are not maintained for residence but house rent is deducted from employee salary every month.
- Quantity and quality of medicine in hospitals both are heightened. Quantity according to demand is not met and the quality of medicine is low as per standards
- Most X-ray machines are conventional and their results are with errors. Digital X-ray machines are rarely in hospitals.
- Doctors feel insecure so they try to refer their patients to upstream hospitals, who can be treated at the hospital. By providing security the referral patients can be minimized.

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 Sahiwal region currently performs poorly on a number of important health indicators, including infant mortality rates, antenatal care, and number of doctors etc.



The Sahiwal 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., 78 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 other indicators as well.

Table 11: Progress Against Province Average and SDG Target

Sahiwal Division	Province average	SDG Target
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Under-five mortality (lives per 1000 births)	78	69	25
Neo-natal mortality (lives per 1000 births)	45	41	12
Immunization Coverage	84.0%	74.7%	100%
Multi-dimension Poverty Index	32.5%	26.10%	15.70%

Source: MICS 2017-18

3.1.2 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 Index³, Sahiwal is performing well as compared to other districts, however only half of the population in Sahiwal has access to essential health services/ universal health coverage, which is far from the global UHC Service Coverage Index target of 80+ by 2030. Pakpattan and Okara are the worst performing districts.

Table 12: District-level UHC Service Coverage Index 2021




	Sahiwal	Pakpattan	Okara
UHC Service Coverage Index 2021	50.80%	46.06%	48.83%
Ranking in Punjab	11	33	21

3.1.3 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 Pakpattan and Okara are worst off, since only 71.8% and 74.6% 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 other districts.

Table 13: 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
Sahiwal	59.3	84.4	0.5
Pakpattan	38.3	71.8	0.2

Okara	46.7	74.6	0.3
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Source: MICS 2017-18

3.1.4 High Prevalence of Disease

The poor quality of drinking water in Sahiwal poses a substantial risk to the health of the community. The presence of contaminants, pollutants, and high levels of harmful substances in the drinking water supply has raised serious concerns about public health. Consequently, an increasing number of individuals are experiencing renal complications, necessitating the need for dialysis treatment. The table below shows that there is more than 50%percentage of households having basic drinking water, sanitation, and hygiene services.

Table 14: Percentage of Household Having Basic Drinking Water, Sanitation and Hygiene Services

#	Districts	% of HH having basic drinking water, sanitation, and hygiene services
1-	Sahiwal	65.0
2-	Pakpattan	55.4
3-	Okara	59.9
	Punjab	64.8

Source: MICS 2018

To address this pressing issue, there is a need for conducting comprehensive and regular assessments of the drinking water sources in Sahiwal by proactively addressing the poor quality of drinking water in Sahiwal, the government can alleviate the burden on healthcare facilities and improve the overall health and well-being of the community.

3.1.5 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 Sahiwal division. Following figure highlights the observations from the field:

3.2 Spatial Mapping of Uncovered Areas

The Sahiwal 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.

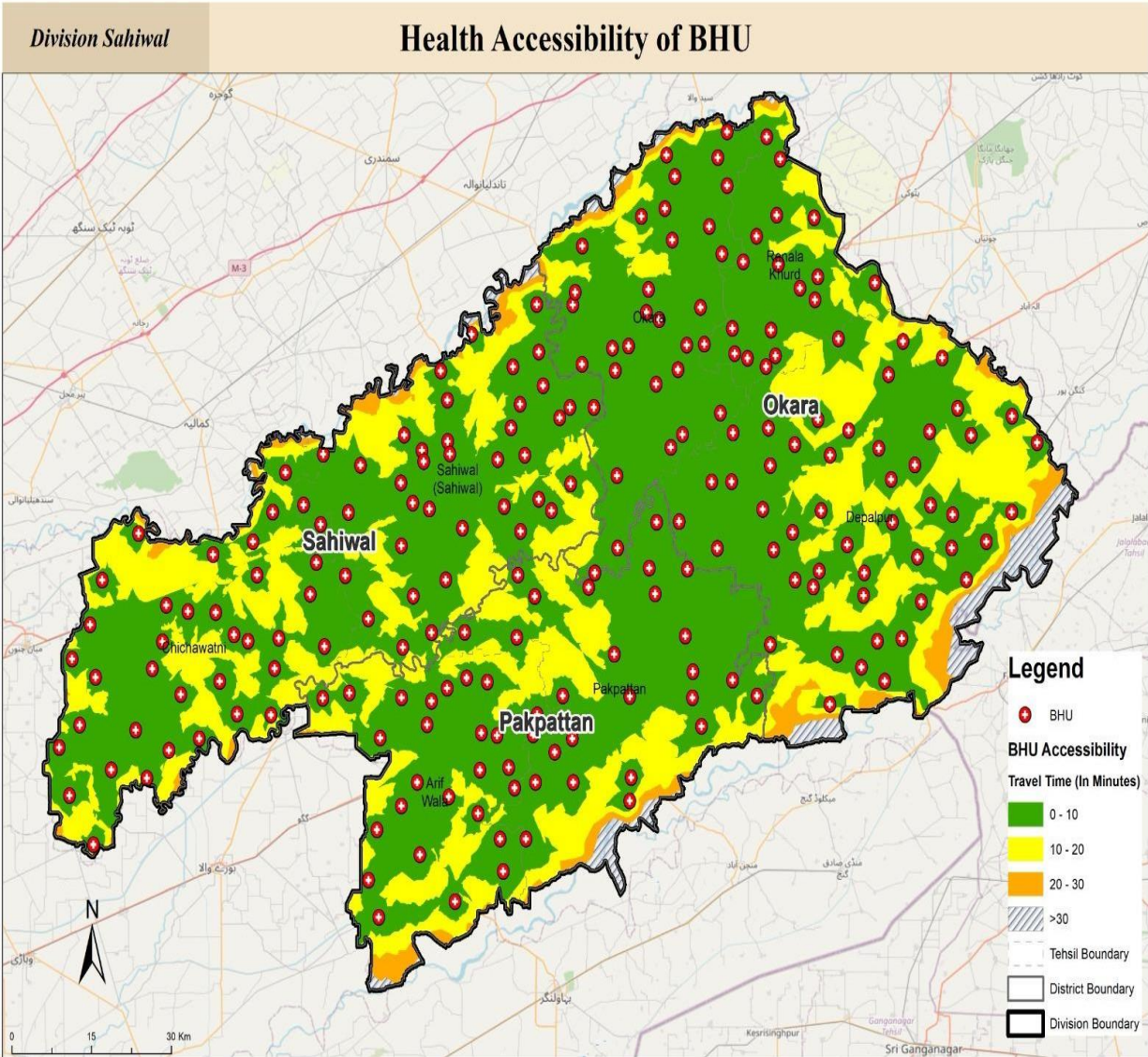


Figure 4: Health Accessibility of BHU in Sahiwal division

The map illustrates BHU accessibility in Sahiwal 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.

Sahiwal division has three districts. In Okara district, with 49 thousand population have been unserved for health facilities and about 53 UCs have no BHUs that are 1/SP Wasaway Wala, 42/SP, Samundari, Arora Mian Khan, Bareet, Bhonga Saleh, Bonga Amir Singh. Dhalyana, Dharmey Wala, Dhool Choor, Doulo Wal, Jaith Pur, Kalasan Hameed, Kalasan Paramal, Kandu Wal Sarai, Kharal Kalan, Mehr Shah Khaga, Mohib Ali Utar, Mustafabad, Qila Javind Singh, Qila Sohnda

Singh, Shah Yakka, Sher Garh, Sobha Ram, Vendla Jagir, Bibi Pur, Burj Jeway Khan, Chak No. 18/GD, Chak No. 30/4L, Chak No. 31/2L, Chak No. 36-A/4L, Chak No. 37/GD, Chak No. 38/2RA, Chak No. 38/GD, Chak No. 40-A/4L, Chak No. 40/GD, Chak No. 45/GD, Chak No. 52/2L, Chak No. 54/2L, Chak No. 9/4L, Chak No.34/GD, Feroz, Gogera, Mangan, Satghara, Sharin, Zakheera Gashkori, Bama Bala, Chak No. 11/1AL, Chak No. 4/GD, Chak No. 5/1RA, Chak No. 6/1AL, Chak No. 9/1AL and L-Plot Faujianwala.

In District Sahiwal, almost 15 thousands people remained unserved because UCs that don't have BHUs are; Chak No. 10/11-L, Chak No. 101/12-L, Chak No. 114/7-R, Chak No. 119/7-D-R, Chak No. 147/9-L, Chak No. 23/14-L, Chak No. 4/14-L, Chak No. 45/12-L, Chak No. 57/12-L, Chak No. 6/14-L, Chak No. 8/11-L, Chak No. 93/12-L, Chak No. 110/9-L, Chak No. 112/9-L, Chak No. 134/9-L, Chak No. 138/9-L, Chak No. 185/9-L, Chak No. 44/5-L, Chak No. 59/G-D, Chak No. 60/5-L, Chak No. 88/9-L, Harappa, Jinnah Town Harrapa and Noor Shah

Moreover, in district Pakpattan, about 28 thousands people are lived in unserved areas where they don't have access to BHUs, 14 missing UCs exist in Pakpattan are; Chak Arazi Dilawar, Chak Jammu Bodla, Chak No. 147/EB, Chak No. 163/EB, Qaboola Bayle Ganj, Bunga Hayat, Chak No. 17/SP, Chak No. 30/SP, Chak Sandhay Khan, Dhapai Feroze Pur Chishtian, Hotta and Malka Hans.

3.2.2 Uncovered areas for RHCs services

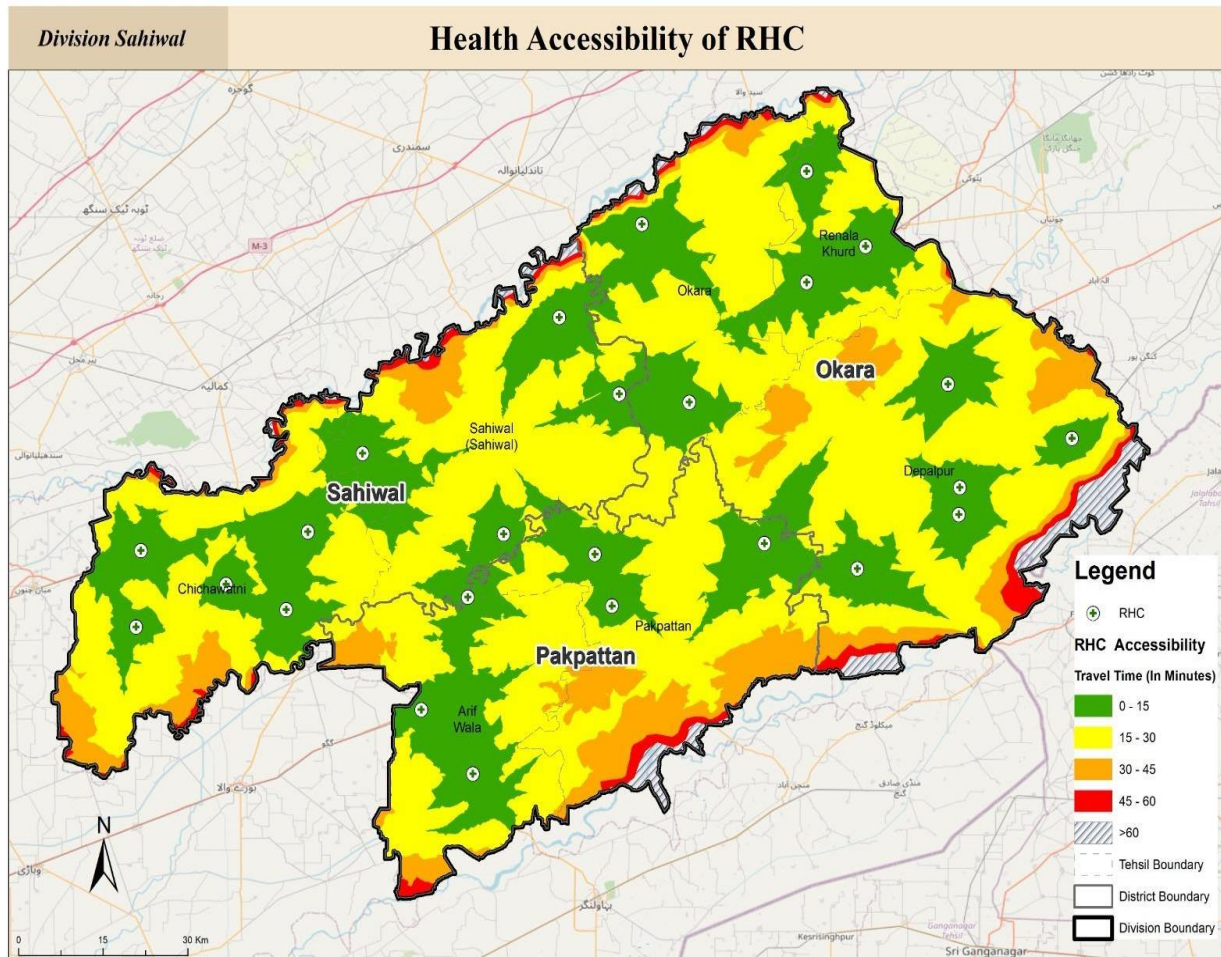


Figure 5: Health Accessibility of RHC in Sahiwal Division

The above map shows the number of RHCs in Sahiwal division. In Sahiwal district, 9 RHCs exist and 15,357 people live in unserved areas. In district Okara, there are 10 RHCs and almost 41,437 thousand population live in unserved areas means they don't have access to RHCs. Whereas in Pakpattan district, 6 RHCs are there with 24,526 people being living in unserved areas.

The Rural Health Centers (RHCs) play a crucial role in providing essential healthcare services, especially in the Sahiwal division. With most RHC facilities located within a 1-15-minute travel time range, they serve as readily accessible healthcare hubs for a significant portion of the population. However, the observed need for additional health facilities at the RHC level underscores the demand for expanded healthcare access to better serve the community. This entails initiatives such as enhancing existing RHCs, establishing new ones, and improving infrastructure

and staffing to cater to a broader range of medical needs beyond maternity care. Moreover, improving transportation infrastructure especially by improving **1122 SOP** for pick & drop patient can facilitate easier access to these vital healthcare services within a reasonable travel time. Ultimately, ensuring the availability of quality healthcare services at the RHC level is crucial for promoting public health and well-being, particularly in rural areas like the Sahiwal division.

3.2.3 THQs services

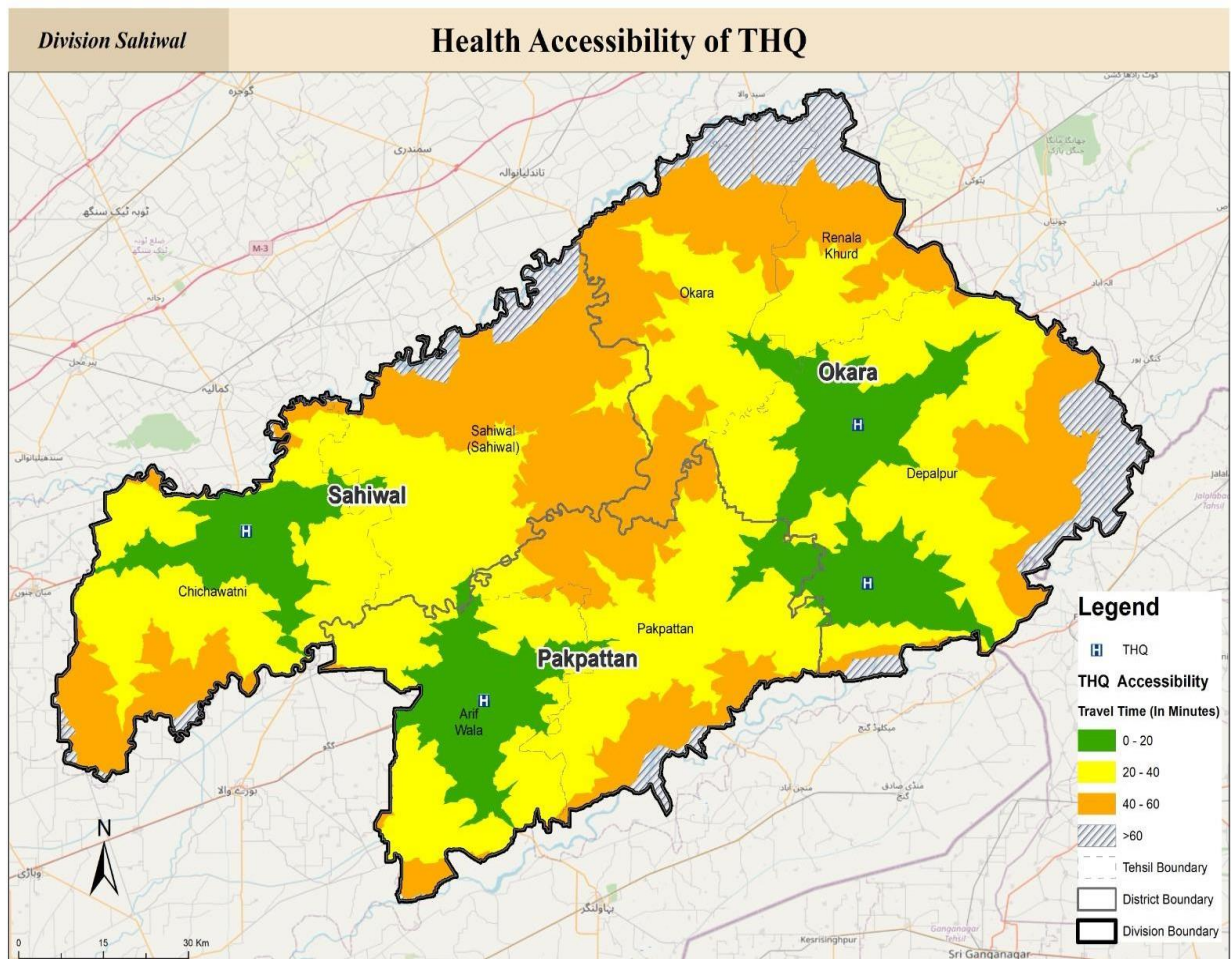


Figure 6: Health Accessibility of THQ in Sahiwal Division

In the Okara district, there are two Tehsil Headquarters (THQs) with an unserved population of 240,413 lacking access to healthcare facilities. Meanwhile, in Sahiwal district, there are three THQs, and 178,923 individuals are without adequate healthcare services. Additionally, Pakpattan district has one THQ, serving an unserved population of 85,366 in terms of healthcare access.

The absence of Tehsil Headquarters (THQ) facilities in Tehsil Okara, Renala Khurd, Sahiwal, and Pakpattan is concerning, as it contravenes the minimum service delivery standards which recommend providing THQ facilities in each tehsil. This lack of THQ facilities leaves a significant portion of the population underserved. 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.

3.2.4 DHQs Services

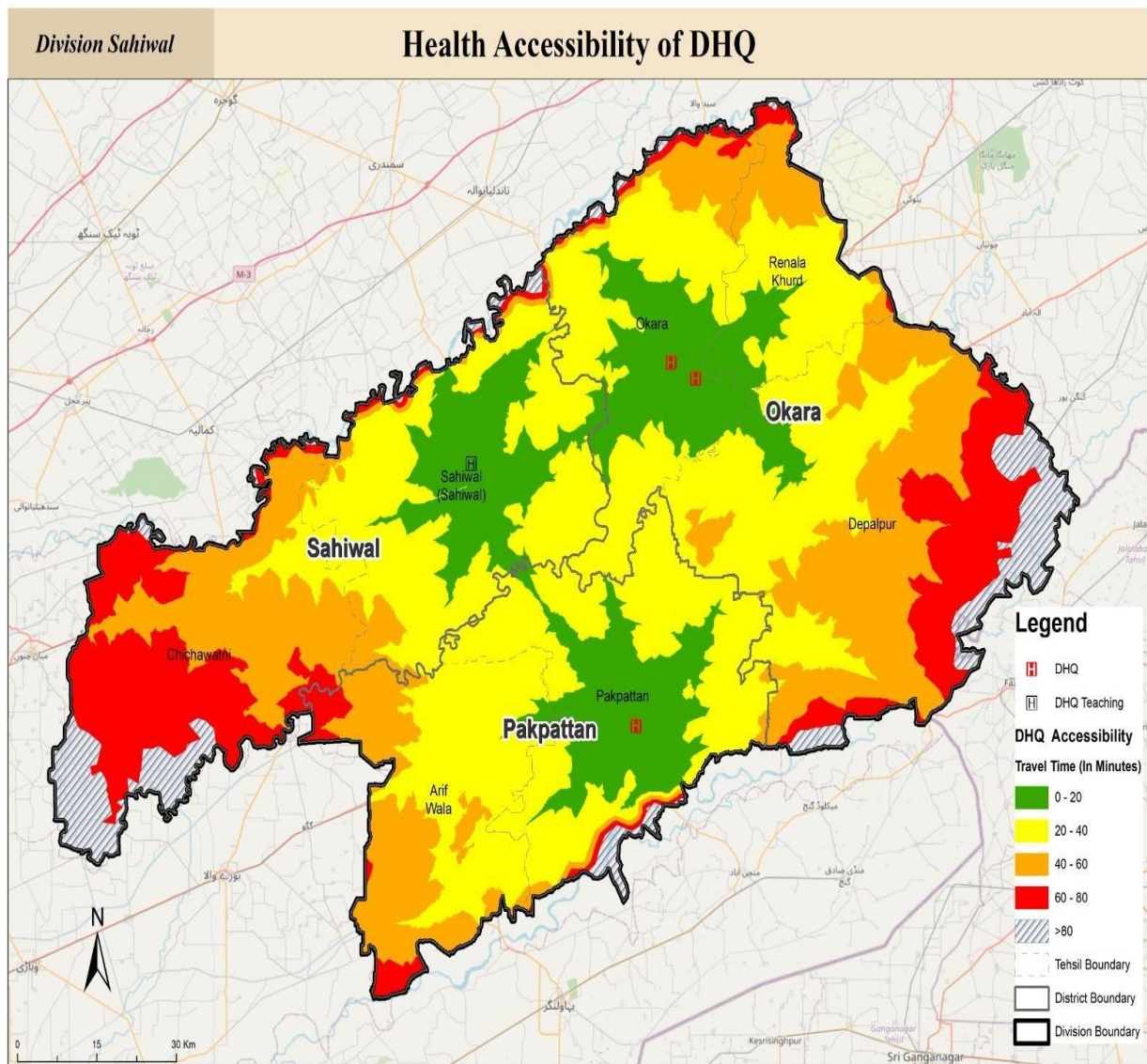


Figure 7: Health Accessibility of DHQ in Sahiwal Division

The map provides insight into the distribution of District Headquarters (DHQs) across the three districts of the Sahiwal division. In Okara, Pakpattan, and Sahiwal districts, each has one DHQ in operation. However, in Sahiwal district, although there is one DHQ, it functions solely as a teaching hospital, and the establishment of new DHQs is currently in progress. Consequently, a significant population remains underserved in Sahiwal, totaling 226,301 individuals, while in Okara, the unserved population stands at 103,432. Additionally, Pakpattan has 24,537 people residing in areas lacking access to healthcare facilities.

Chapter 4: Way Forward and Proposed Interventions

Proposed Areas of Intervention

Recommended Interventions for the Health Sector (Rs. 2386.5 MILLION)	
TYPE	INTERVENTION
Infrastructure (Boundary Wall, Day Care Centers, Stroke Centers, Medicine Store Warehouse)	Construction of boundary wall and day care centers is essential for ensuring the safety, security, and privacy of patients and staff. Stroke center is imperative for providing specialized care. Medicine store warehouse ensures the access to essential medications and enhance emergency preparedness <i>59 facilities, Rs. 1792 Million</i>
Infrastructure (Improvement of Sewerage system)	Improve sewerage system in health facilities is necessary for safeguarding public health, preventing infections, providing safe and high-quality healthcare services to communities. <i>10 facilities, Rs.20 Million</i>
Provision of Equipment and Machines	Provision of machines (Ultrasound, dialysis machine, CT Scan, digital X-Ray, cardiac monitor enhances diagnostic capabilities, point-of-care diagnosis and guides medical procedures <i>202 units, Rs. 522.5 Million</i>
Provision of Ambulance Service	Ambulance service is an integral component in health facility's operation, provide emergency response and patient transportation <i>26 facilities, Rs. 52 Million</i>

Table 15: Short- Term to Medium Term Proposed Projects

S. No	Project Name	District	Total Cost in PKR Million
1	Provision of 2 Cardiac Monitor, 2 Dialysis machines at THQ Okara and in DHQ Sahiwal	Okara & Sahiwal	0.5
2	Replacement of Digital x-ray Machine in 21 RHCs (10 Okara & 11 Sahiwal)	Okara & Sahiwal	11
3	Provision of 76 Ultrasound machine at BHU level	Okara	205
4	Provision of 57 Ultrasound machine at BHU level	Sahiwal	154
5	Provision of 45 Ultrasound machine at BHU level	Pakpattan	122
6	Provision of 5 ambulances for 5 RHC Pakpattan	Pakpattan	10
7	Provision of 10 ambulances for 10 RHC Okara	Okara	20
8	Provision of 11 ambulances for 11 RHC Sahiwal	Sahiwal	22
9	Improving sewerage system in 4 BHU & in 1 DHQ health facilities in Pakpattan & 1 BHU of Sahiwal	Sahiwal & Pakpattan	12
Total			556.5

Short term to medium term interventions is designed to respond to pressing problems in the existing health system of Sahiwal 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. **The Token fee should be charged, it has two major outcomes**
 - Highly important medicine be can locally purchase (LP)
 - Unneedy persons will be minimized to take medicine from the hospital
2. **BHUs should be merged into an equipped with HR and machinery RHC**
 - The referral patients will be minimized as they will be treated at RHC.
 - Two Ambulances should be given to RHC, to cater the patients in the recommended hospitals.
 - Transport issues will be settled as referral patients minimized
3. **SOP of 1122 should be revised as all hospitals depend on 1122**
 - Changing the SOP for 1122 Rescue Ambulances only facilitate the transfer of patients from first-level hospitals to higher-level of hospitals involves a careful review and adjustment of existing protocols. While often patient cares demand directly to the higher level of hospital emergency treatment.
4. At the THQ level important departments should be there so that at the tehsil level a major number of patients can treated.
5. At THQ and DHQ one radiologist should there.