# Chapter-4

# Health Sector

# Rawalpindi Regional Development Plan

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# Chapter 1: Introduction

According to the 2017 census, the population of Punjab was 110 million. The population growth was about 2.13%. About 63.14% of the population lives in rural areas and 36.86% lives in urban areas of Punjab. Rawalpindi Division is now an administrative division of the Punjab province. The Rawalpindi division encompasses four districts, each with its own distinct population size. Leading the pack with the highest population count is Rawalpindi, boasting a substantial 5.4 million approx. residents. Next in line is Attock, home to 18 million people, followed closely by Chakwal, with a population of 1.5 million. At the bottom of the list is Jhelum, with the smallest population among the division's districts, totaling 1.2 million residents. Collectively, these districts contribute to a total population of 10 million appx. in the Rawalpindi division, reflecting the diversity and demographic richness of the region in Pakistan.

The health care system comprises of private, public, and semi-government hospitals in all four districts of Rawalpindi. While health facilities in Rawalpindi division are comparatively better. The Sehat cards have been issued to uplift common people. The initiatives include subsidized healthcare, immunization campaigns and maternal and child health programs

*Table 1: health facility in Rawalpindi Division*

| **Facility type** | | **Health facilities in Rawalpindi Division** | | | | **Total** |
|---|---|---|---|---|---|---|
| | | **Rawalpindi** | **Attock** | **Chakwal** | **Jhelum** | |
| **Hospital** | NO. | 21 | 7 | 7 | 7 | **42** |
| | Beds | 4301 | 481 | 420 | 470 | **5672** |
| **RHCs** | NO. | 12 | 6 | 11 | 6 | **35** |
| | Beds | 160 | 110 | 210 | 120 | **600** |
| **BHUs** | NO. | 111 | 62 | 64 | 48 | **285** |
| | Beds | 198 | 124 | 130 | 95 | **547** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Dispensaries** | NO. | 97 | 26 | 32 | 27 | **182** |
| | Beds | 26 | 0 | 0 | 0 | **26** |
| **MCH centers** | NO. | 6 | 4 | 7 | 6 | **23** |
| | Beds | 0 | 0 | 0 | 0 | **0** |
| **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 | 25 | 0 | **25** |

**Source: Punjab Development Statistics (PDS) 2022**

Health is a critical element in human development and has significant impact on social progress. Investing in the health of a society is essential to enhance the productivity of workforce by increasing their physical capabilities, which include strength and endurance. 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.

Based on Household (HH) perception of the performance of BHUs in the Rawalpindi division, the following table shows the care seeking behaviour during Acute Respiratory Infection (ARI), which is one of the top diseases in the region. More than half of the patients of ARI, reached out to private health facilities for advice and treatment as shown in the table below. While only a small proportion of respondents reported availing the facilities of public facilities which raises the question as to why citizens are not availing the public services. Whereas more than 20% HH don't seek advice or treatment for disease like diarrhea. Moreover, HH satisfaction level by BHUs in, Rawalpindi, Attock, Chakwal and Jhelum are less than 91%.

While there have been efforts to improve healthcare services in Rawalpindi Division, there are still several challenges that the healthcare system faces like access to healthcare services can be

unequal, with urban areas generally enjoying better access than their rural and remote counterparts. This discrepancy often results from inadequate healthcare infrastructure, a shortage of skilled professionals, and limited medical equipment in rural areas. Moreover, affordability remains a concern for many, especially those with limited financial resources. To bolster the healthcare system, it's vital to improve health education, raise awareness of preventive measures, and promote healthier behaviors among the population.

The tables below show key performance indicators of health gathered from PSLM 2020 and MICS 2019 reports. The data through the said sources helps us draw a comparative performance analysis against the four districts of Punjab that are Rawalpindi, Attock, Chakwal and Jhelum respectively. Red coloured cells in the table will be representing an underperformed and unutilised sector compared to the other two capitals. Green coloured cells will depict an overall better performance in Rawalpindi division and yellow will be representing lower rates of performance compared to one city and better against the other.

*Table: 2 Disease Prevalence in Rawalpindi Division and in its districts*

| ***Indicator*** | **Categorization** | **Punjab** | **Rawalpindi** | **Attock** | **Chakwal** | **Jhelum** |
|---|---|---|---|---|---|---|
| *Percentage of Children Aged 12-23 Months That Have Been Immunized (based on recall) Atleast one immunization* | Urban | 99 | 99 | 100 | 100 | 100 |
| | Rural | 98 | 100 | 99 | 100 | 98 |
| | Total | 98 | 100 | 99 | 100 | 99 |
| *Percentage of Children Aged* | Urban | 81 | 89 | 92 | 88 | 100 |
| | Rural | 81 | 95 | 84 | 96 | 81 |

| | | | | | | |
|---|---|---|---|---|---|---|
| *12-23 Months That Have Been Immunized* (BASED ON RECORD) - FULLY IMMUNIZED | Total | 81 | 92 | 86 | 95 | 85 |
| *Percentage of Children Aged 12-23 Months That Have Been Immunized* (C: BASED ON RECALL AND RECORD) - FULLY IMMUNIZED | Urban | 88 | 91 | 92 | 94 | 100 |
| | Rural | 89 | 95 | 84 | 96 | 81 |
| | Total | 89 | 93 | 86 | 96 | 85 |
| Percentage of Children 12-23 Months That Have Been Immunized | BCG | 87 | 97 | 99 | 99 | 98 |
| | PENTA1 | 86 | 96 | 97 | 99 | 97 |
| | PENTA2 | 84 | 96 | 93 | 97 | 94 |
| | PENTA3 | 84 | 94 | 93 | 96 | 88 |
| *Percentage of Children 12-23 Months that have been Immunized.* | BCG | 96 | 98 | 99 | 100 | 98 |
| | PENTA1 | 95 | 98 | 97 | 100 | 98 |
| | PENTA2 | 92 | 97 | 93 | 98 | 95 |
| | PENTA3 | 92 | 96 | 93 | 97 | 88 |

| | | | | | | |
|---|---|---|---|---|---|---|
| BY TYPE OF ANTIGEN-BASED ON RECORD AND RECALL *5* | PNEU1 | 94 | 97 | 97 | 99 | 86 |
| | PNEU2 | 92 | 96 | 95 | 97 | 85 |
| | PNEU3 | 91 | 96 | 93 | 96 | 85 |
| | POLIO1 | 94 | 97 | 94 | 99 | 86 |
| | POLIO2 | 92 | 95 | 89 | 98 | 86 |
| | POLIO3 | 90 | 93 | 86 | 97 | 85 |
| | MEASLES | 91 | 95 | 94 | 96 | 85 |
| *Percentage of Children 12-23 Months That Have Been Immunized DONE 4*<br><br>*By type of antigen based on record* | BCG | 87 | 97 | 99 | 99 | 98 |
| | PENTA1 | 86 | 96 | 97 | 99 | 97 |
| | PENTA2 | 84 | 96 | 93 | 97 | 94 |
| | PENTA3 | 84 | 94 | 93 | 96 | 88 |
| | PNEU1 | 85 | 95 | 97 | 98 | 86 |
| | PNEU2 | 84 | 94 | 95 | 96 | 85 |
| | PNEU3 | 83 | 94 | 93 | 95 | 85 |
| | POLIO1 | 87 | 95 | 94 | 98 | 86 |
| | POLIO2 | 83 | 93 | 89 | 97 | 86 |
| | POLI03 | 82 | 92 | 86 | 96 | 85 |
| | MEASLES | 83 | 93 | 94 | 95 | 85 |

**MICS: 2018, PSLM: 2020**

Table showed some regions within Punjab, such as Attock and Rawalpindi, have lower percentages of the population reporting sickness or injury compared to the Punjab average, certain rural areas within these districts exhibit comparatively worse child immunization rates, both based on records and recall. These insights can be valuable for targeted health interventions and policies to improve healthcare access and immunization coverage in specific areas where it is needed most.

| *Indicator* | Categorization | Punjab | Rawalpindi | Attock | Chakwal | Jhelum |
|---|---|---|---|---|---|---|
| *Percentage Distribution of Population Fallen Sick or Injured During Last* | Sick or injured | 6.79 | 6.06 | 3.32 | 5.70 | 5.04 |
| | Health Consultation | 96.37 | 93.34 | 93.15 | 95.24 | 94.78 |
| Children Under 5 Suffering from Diarrhea In Past 30 Days (D2) | URBAN | 5 | 3 | 0 | 13 | 8 |
| | RURAL | 6 | 4 | 2 | 6 | 8 |
| | TOTAL | 6 | 3 | 2 | 7 | 8 |
| Treatment Of Diarrhea in Children Under 5 Years where Practitioner was Consulted (d3) | URBAN | 89 | 91 | 0 | 76 | 94 |
| | RURAL | 90 | 89 | 68 | 81 | 91 |
| | TOTAL | 90 | 90 | 68 | 80 | 92 |
| Treatment Of Diarrhea in Children Under 5 Years where ORS was given to child (d4) | URBAN | 73 | 90 | 0 | 84 | 100 |
| | RURAL | 77 | 83 | 92 | 71 | 97 |
| | TOTAL | 76 | 87 | 92 | 75 | 98 |
| Percentage with comprehensive HIV knowledge - Women | | 4.3 | 7.2 | 4.7 | 6.0 | 4.7 |
| Percentage with comprehensive HIV knowledge - Men | | 9.4 | 12.4 | 7.2 | 16.3 | 6.5 |

**MICS: 2018, PSLM: 2020**

The table provides a snapshot of health indicators in different districts of Punjab, Pakistan, including Rawalpindi, Attock, Chakwal, and Jhelum. Notably, the percentage distribution of the population fallen sick or injured during their last health consultation is consistently lower in Attock (3.32%) compared to Punjab (6.79%), suggesting relatively better health conditions in Attock. However, Chakwal has a higher percentage of people falling sick or injured (5.70%), which is worse than the Punjab average. In terms of the treatment of diarrhea in children under 5, Chakwal also exhibits a lower rate of ORS (Oral Rehydration Solution) usage (75%) compared to Punjab (76%), indicating a slightly worse outcome in terms of treating diarrhea in young children in Chakwal. Overall, while some districts show better health indicators than the Punjab average, Chakwal stands out with comparatively worse figures in these specific areas.

| ***Indicator*** | **Categorization** | **Punjab** | **Rawalpindi** | **Attock** | **Chakwal** | **Jhelum** |
|---|---|---|---|---|---|---|
| Pregnant Women that have received Tetanus Toxoid Injection as % of Pregnant Women (m1) | Urban | 87 | 92 | 88 | 90 | 93 |
| | RURAL | 82 | 93 | 94 | 91 | 98 |
| | TOTAL | 83 | 92 | 92 | 91 | 97 |
| Percentage of women currently married who are using no method | | 65.6 | 66.1 | 74.1 | 68.9 | 69.8 |
| Percentage of women currently married who are using any method | | 34.4 | 33.9 | 25.9 | 31.1 | 30.2 |
| Unmet need for family planning | | 17.8 | 21.4 | 24.4 | 19.5 | 20.2 |
| Met need for family planning (currently using contraception) | | 34.4 | 33.9 | 25.9 | 31.1 | 30.2 |
| Total demand for family planning | | 52.2 | 55.3 | 50.4 | 50.6 | 50.4 |
| Percentage of women who, during the pregnancy had | | 11.4 | 24.8 | 13.1 | 18.1 | 28.9 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| blood pressure measured, urine and blood sample taken, weight measured, importance of spacing and information provided for family planning methods | | | | | | | |
| Percentage of women who received at least 2 tetanus toxoid containing vaccine doses during the pregnancy of the most recent live birth | | | 69.7 | 73.5 | 63.1 | 83.4 | 71.7 |
| Delivery in health facility (public / private) | | | 73.3 | 86.3 | 76.6 | 84.7 | 90.0 |
| Post-natal health check | for the newborn | | 69.6 | 75.7 | 72.0 | 74.4 | 83.6 |
| | for the mother (In facility or at home) | | 70.1 | 75.6 | 74.3 | 75.9 | 80.0 |

**MICS: 2018, PSLM: 2020**

Below table presents a range of important health indicators in various districts of Punjab, Pakistan, including Rawalpindi, Attock, Chakwal, and Jhelum. Notably, when compared to the Punjab average, several indicators show differences. In Rawalpindi, Attock, and Jhelum, a higher percentage of pregnant women received Tetanus Toxoid Injections than the Punjab average of 83%, indicating better maternal health practices. However, in terms of "Percentage of women currently married who are using no method," Attock stands out with a relatively higher percentage (74.1%), which is worse than the Punjab average of 65.6%, suggesting a potentially higher unmet

need for family planning in Attock. This data underscores variations in health indicators across these districts, with Attock showing some challenges in family planning compared to the Punjab average.

The table presents data on care-seeking behavior during diarrhea and household satisfaction with Basic Health Units (BHUs) in four districts: Rawalpindi, Attock, Chakwal, and Jhelum. Notably, the percentage of people seeking advice or treatment for diarrhea from public health facilities varies significantly among the districts, with Jhelum having the highest at 37.6%, while Attock has the lowest at 18.2%. Conversely, the percentage of individuals seeking care from private health facilities is highest in Rawalpindi (56.8%) and lowest in Chakwal (43.8%). It's important to highlight that Jhelum has the highest percentage (23.3%) of individuals who did not seek any advice or treatment for diarrhea, which is comparatively worse than the Punjab average. In contrast, Attock stands out with the highest household satisfaction level with BHUs (90.28%), indicating a more positive perception of healthcare services compared to the other districts in the region.

*Table:3 HH satisfaction level of BHUs*

| Care Seeking Behaviors During Diarrhea- Top Disease | | | | | |
|---|---|---|---|---|---|
| | | Rawalpindi | Attock | Chakwal | Jhelum |
| Advice or treatment was sought from | Public HF (%) | 16.4 | 18.2 | 15.5 | 37.6 |
| | Private HF (%) | 56.8 | 51.2 | 43.8 | 39.1 |
| No advice or treatment sought | | 25.1 | 27.3 | 34.7 | 23.3 |
| HH satisfaction level by BHUs | | 81.65 | 90.28 | 77.22 | 67.17 |

# 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 7 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 4: Thematic areas of interventions as per Punjab Health Sector Strategy 2019-2028*

| Sr.# | Punjab Health Sector Strategy 2019-2028 | |
|---|---|---|
| | **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 Rawalpindi and the required beds per population as per the National Reference Manual on Planning and Infrastructure Standards.

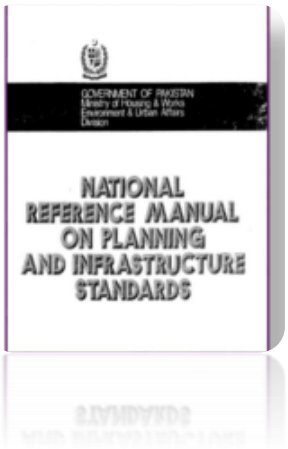



*Table 7: Required Beds as per standards for health facilities.*

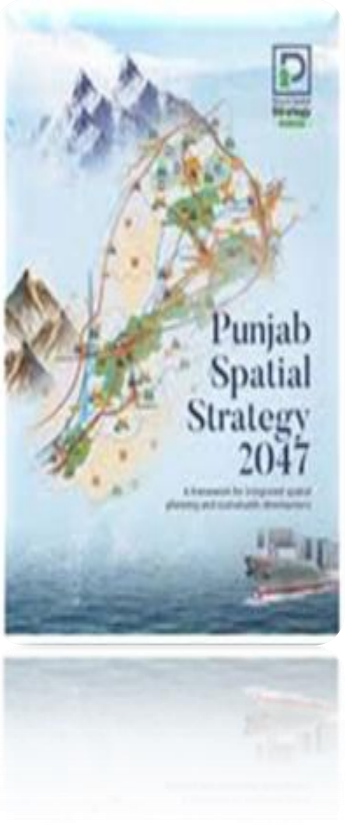
| Districts | Population (Census 2017 - million) | Existing Beds (PDS 2022) | Beds per 1000 population | Population projection 2021 | Required beds per population (2021) |
|---|---|---|---|---|---|
| **Attock** | 1,883,556 | 715 | 0.4 | 2045225 | 0.3 |
| **Chakwal** | 1,495,982 | 785 | 0.5 | 1600962 | 0.5 |
| **Jhelum** | 1,222,650 | 685 | 0.6 | 1293080 | 0.5 |
| **Rawalpindi** | 5,405,633 | 4685 | 0.9 | 5971465 | 0.8 |

| | | | | | |
|---|---|---|---|---|---|
| **Total** | **10,007,821** | **68.70** | **2.3** | **10910732** | **2.1** |

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 Rawalpindi division, the district Multan and Vehari are low priority districts in terms of healthcare provision and performance. While Lodhran and Khanewal are high priority districts in terms of healthcare provision and performance as they are lagging as compared to their neighbouring districts. 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) suing 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:

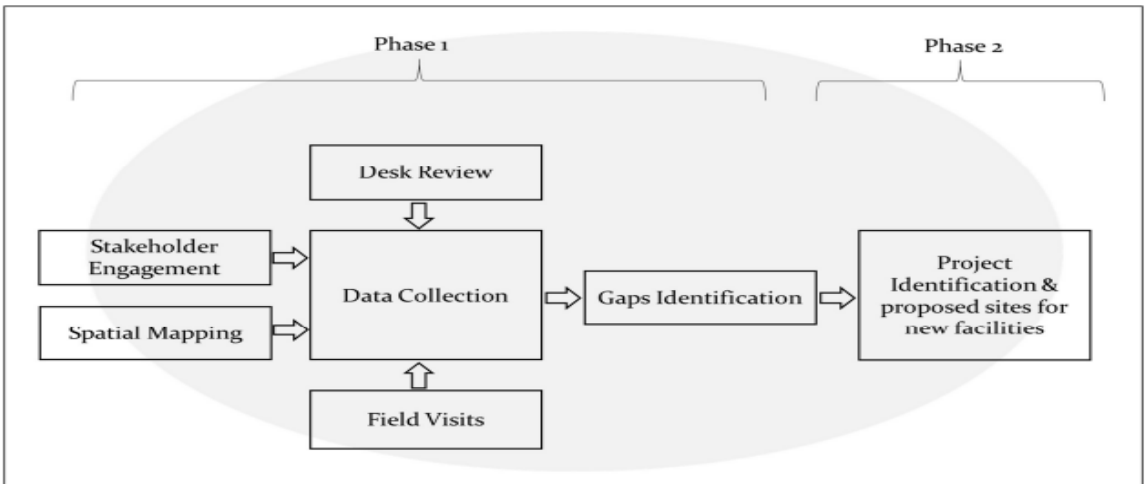



*Figure: 1 methodological framework*

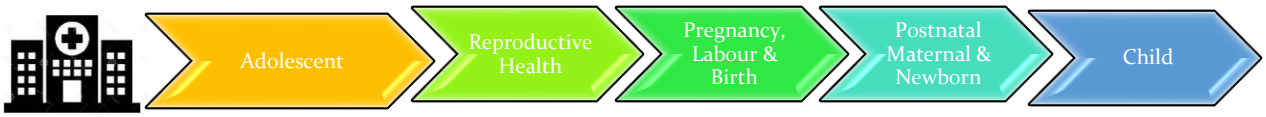
### 2.2.1 Desk Review:

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 analysing 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 behaviour 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 labour 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):*




| | | | | | |
|---|---|---|---|---|---|
| Hospital / Clinical Care | % of children with ARI (infection) for whom no advice or treatment sought<br>6th highest (10.3)<br>Low performing district: **Rawalpind** | % of W who received HIV counselling during antenatal care<br>2nd highest (2.8)<br>Low performing district: **Attock** | % of W whose delivery was assisted by skilled attendant<br>2nd highest (86.4)<br>Low performing district: **Attock** | % of Institutional deliveries<br>1st highest (84.5)<br>Low performing district: **Attock** | Under-5 mortality (per 1000 lives birth)<br>2nd lowest (45)<br>Low performing district: **Rawalpindi** |
| Outpatients & outreach services | % of children who have clinical anaemia (iron deficiency)<br>2nd lowest (3.0)<br>Low performing district: **Chakwal** | Unmet need for Family planning<br>2nd highest (21.6)<br>Low performing district: **Chakwal** | WHO recommended 4 ANC visits?<br>1st highest (72.4)<br>Low performing district: **Attock** | Post-natal care (newborn)<br>3rd highest (75.8)<br>Low performing district: **Attock** | Immunization<br>5th highest (62.5)<br>Low performing district: **Rawalpindi** |

Source: MICS 2017-18, National Nutrition Survey 2018

In the region, there are areas of notable success in certain indicators, such as the percentage of women receiving skilled assistance during childbirth, HIV counseling during antenatal care, and robust immunization coverage. However, challenges persist in key 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, suggesting opportunities for enhancement. A district-level analysis highlights Rawalpindi and Chakwal districts as 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 Rawalpindi division during August 2023. 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 assessment of various health facilities in the Rawalpindi division in 2022, also met various officials and stakeholder including:

- **Chief Executive Officer (CEO), Chakwal**
- **District Health officer, Chakwal**
- **Chief Executive Officer (CEO), Rawalpindi**
- **District Health officer, Rawalpindi**
- **Chief Executive Officer (CEO), Attock**
- **District Health officer, Attock**
- **Chief Executive Officer (CEO), Jhelum**
- **District Health officer, Jhelum**


*Figure 3: Stakeholder meetings*

Consultations with stakeholders were conducted for the shared understanding of the prevailing health condition in Rawalpindi. 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 and the following recommendations were proposed:

## District Rawalpindi

*Table 6: Missing Health Facilities in Rawalpindi District*

| Type Of Facilities | No. Of Facility | Total No of Bed(Functional & Non-functional) | Missing HR/Doctor | Missing Services/ Medicines | Missing Health Facilities/ Infrastructure/ Equipment |
|---|---|---|---|---|---|
| **BHU** | 100 | 218 | Paramedics Staff | | |
| **RHC** | 40 | 160 | Paramedics Staff | | |
| **DHQ** | | | | | |
| **THQ** | 73 | 512 | Paramedics Staff | | |
| **GHD** | 6 | | | | |
| **MCH** | 13 | | | | |
| **MMC** | 24 | | | | |
| **RD** | 48 | | Paramedics Staff | | |
| **Teaching Health Facilities** | 1 | 560 | | | |
| **Tertiary Care Hospital** | 1 | 1025 | Nurses, Consultants, And Technicians | Parking Area | Poor Infrastructure |

**Rawalpindi Health Sector Issues:**

- THQ Rawalpindi faces issued regarding shortage of residences, daycare center, medicine supply on time, sewerage system of hospital, parking shed, short limit of medical and general store.

- THQ needs equipment related ENT, ETT, trauma center, laparoscopy, eyes laser treatment, ECG machine, delivery tables.
- RHC Mandra faced shortage of HR and rooms, need improvement in gynae and emergency wards (bed & equipment), equipment required for x-ray and dental room, building need repairing and poor condition of doctors & staff residences.

*Figure 4: condition assessment field visit of health facility in Rawalpindi District*

**DISTRICT JHELUM**

*Table7: Missing health facilities in Jhelum District*

| Type Of Facilities | No. Of Facility | Total No of Bed(Functional & Non-functional) | Missing HR/Doctor | Missing Services/ Medicines | Missing Health Facilities/ Infrastructure/ Equipment |
|---|---|---|---|---|---|
| **BHU** | 42 | 90 | | Pathology lab, ambulance, Internet / Sui Gas | Internet, sui gas, Boundary Wall, Repair of Residential Building, USG Machine, Sewerage |
| **RHC** | 4 | 80 | Consultants | Ambulance, Dental X-ray machine, Solar ILR | Medical stores |
| **MCH** | 1 | 1 | | | |
| **THQ** | 1 | 80 | | Ambulance, Solar ILR | |
| **DHQ** | 1 | 400 | | | |
| **GRD** | 5 | 16 | | Ambulance (off-roads), Solar ILR | |
| **RD** | 2 | 3 | | | Repair of main building |
| **E&EDC Centre** | 1 | 5 | | | |
| **Health Filter Clinic** | 1 | 2 | | | USG Machine |
| | | | | | |

**Jhelum Health Sector Issues**

- THQ in Dina is not available, that's why RHC of Dina is over burden, need to upgrade RHC of Dina to THQ.
- THQ Sohawa faced shortage of consultant doctors, HR for ultrasound attendant. Need to address issue of widening of OPD blocks also OPD consultant needs to enhance and medical store congestion.
- Upgradation MCH of Pind Dadukhan
- DHQ of Jhelum need to addressed issues related shortage of residences, trauma center, patient waiting branches, medicine store space, Cardiac and OT machinery, repair of transformer generator and Acs. Furthermore, dialysis center needs to be expanded.
- DHQ needed MRI machine, Endoscopy, equipment related neurosurgery, delivery table and blood storage.
- Budget should be aligned with inflation rate and delivery service criteria should be based on the requirement of patient not their old minimum service delivery standards.

*Figure:5 Condition assessment field visit of health facilities in Jhelum District*

## DISTRICT CHAKWAL

*Table 8: Missing health facilities in Chakwal District*

| Type Of Facilities | No. Of Facility | Total No Of Bed (Functional & Non-functional) | Missing HR/Doctor | Missing Services/ Medicines | Missing Health Facilities/ Infrastructure/ Equipment |
|---|---|---|---|---|---|
| **BHU** | 63 | 152 | | Broad band internet connection | Ultrasound machine, new construction of residencies, ACs, Old Dental & X-ray unit needs to be upgraded, |
| **RHC** | 11 | 189 | | Broad band internet connection | Ultrasound machine, new construction of residencies, ACs, Old Dental & X-ray unit needs to be upgraded, |
| **DHQ** | 1 | 230 | House job facility | | Dialysis machine, Autoclave, Cardiac Monitor and repairment sewerage system |
| **THQ** | 4 | 230 | Consultant Dermatologist,<br>Consultant Anesthetist,<br>Consultant Pulmonologist,<br>Blood Bank Staff. | Day care center, | Radiology Department,<br>ENT Department,<br>Ophthalmology Department,<br>Cardiology Department,<br>Pathology Department.<br>Dialysis machine, auto clave, cardiac monitor, repairment of sewerage system, dialysis center |

## DISTRICT ATTOCK

*Table9: Missing health facilities in Attock District*

| Type Of Facilities | No. Of Facility | Total No of Bed(Functional & Non-functional) | Missing HR/Doctor | Missing Services/ Medicines | Missing Health Facilities/ Infrastructure/ Equipment |
|---|---|---|---|---|---|
| **BHU** | 62 | 142 | Lacks contractual staff | Lacks ambulance service and solar ILR | |
| **RHC** | 9 | 130 | Lacks contractual staff, TB / Chest Specialist, Pediatrician, Radiologist ENT Specialist, Senior Consultants, APMO. Vacant | Ambulance, Solar ILR | OT light, OT table, Air condition, bed side bench, CBC analyzer, HB meter, computer table, UPS with battery, Gas connection for residences, Machinery, Air Condition (ACs) |
| **DHQ** | 1 | 210 | | ILR facilities (Electric and solar ILR) | Neurosurgery<br>CT Scan<br>MRI<br>Mammography<br>Burn Unit<br>Invasive Ventilators<br>Oncology |
| **THQ** | 5 | 339 | Lack of Consultants | Solar ILR | Orthopedic Department & Neurology Department, Dermatologist. TB / Chest Specialist,<br>Pediatrician<br>Radiologist,<br>ENT, Specialist,<br>Senior Consultants |

## Attock Health Sector Issues

- In DHA Attock, it lacks CEO and DHO office.

- It has shortage of blood banks, pathology department and OPD blocks.
- It requires more Human Resource including consultants.
- In Jand Tehsil BHU is missing whereas Haji shah BHU needs to be updated to RHC
- DHQ needs to be expand as there is not enough space to meet patient inflow. In THQ Hassanabdal, there is lack of space, equipment, and blood banks.

- It has major issues regarding infrastructure and human resource that includes supporting staff and nurses.
- It also lacks cardio, artho and neuro centers.
- In THQ Fatah Jang, paeds and general (for both males and females) wards are required.
- It requires proper equipped laboratory and increase number of laboratories to meet the need of patient's inflow.
- There is a need of proper waiting and parking areas along with general store cafeteria and water plant.


- For doctors and nurses hostel type residencies are required
- In BHU, consultant should be appointed shift wise or department wise.
- It requires more equipment as some lacks, and some are non-functional.
- It lacks proper eye center, conference room, separate rooms for consultants and doctors.
- It requires proper labs to meet the need of existing patient's inflow.
- RHC Bahtar requires medical stores, emergency block.
- It lacks services like ambulance, general store, and medical stores.
- No availability of cardio consultant and ventilators.


*Figure: 6 condition assessment field visit of health facilities in Attock District*

# Chapter 3: Gaps Identification:

## 3.1 Challenges and Constraints

### 3.1.1 Poor progress against SDGs


The Health Sector Plan will highlight the situational analysis of the health system in the region and will identify the lagging areas which needs to be catered to. Health is a critical element in human development and has a significant impact on social progress.

Investing in the health of a society is essential to enhance the productivity of workforce by increasing their physical capabilities, which include strength and endurance. Moreover, provision of inclusive, affordable, and quality healthcare is an important measure of the quality of life. Presently, the Rawalpindi region suffers from low performance on the major health indicators like infant mortality rates, antenatal care, number of doctors etc.

The overall progress of the Rawalpindi Division is very poor against the major Sustainable Development Goals (SDGs) indicators related to health. It can 19 be seen from the following figure that high rate of under-five mortality of the division i.e., 84 lives per 1000 births, is very far away from SGD target 2030 of 25 lives per 1000 births. Similar is the case for other indicators.

*Table 10: Progress against province average and SDG target*

| | Rawalpindi Division | Province average | SDG Target |
|---|---|---|---|
| **Under-five mortality (lives per 1000 births)** | 45 | 69 | 25 |
| **Neo-natal mortality (lives per 1000 births)** | 26 | 41 | 12 |
| **Immunization Coverage** | 68.2% | 74.7% | 100% |
| **Multi-dimension Poverty Index** | 9.9% | 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, Rawalpindi is performing well as compared to other districts, however only half of the population in Rawalpindi has access to essential health services/ universal health coverage, which is far from the global UHC Service Coverage Index target of 80+ by 2030. Attock and Chakwal are the worst performing districts.

*Table 11: District-level UHC Service Coverage Index 2021*

| | Rawalpindi | Attock | Chakwal | Jhelum |
|---|---|---|---|---|
| **UHC Service Coverage Index 2021** | 56.72% | 48.44% | 49.05% | 55.11% |
| **Ranking in Punjab** | 2 | 24 | 19 | 3 |

Source: Pakistan 2021 Monitoring Report Universal Health Coverage

### 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 Chakwal and Attock are worst off, and least births since only 77.5% 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 12: 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 |
| **Attock** | 75.3 | 77.5 | 0.17 |
| **Chakwal** | 60.3 | 86.9 | 0.40 |
| **Jhelum** | 72.2 | 93.9 | 0.38 |
| **Rawalpindi** | 81.3 | 88.1 | 1.61 |

Source: MICS 2017-18

### 3.1.4 High prevalence of disease

The poor quality of drinking water in Rawalpindi 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.  province average is below district average.

*Table13: Percentage of household having basic drinking water, sanitation and hygiene services*

| # | Districts | % of HH having basic drinking water, sanitation, and hygiene services |
|---|---|---|
| **1-** | Attock | 72.8 |
| **2-** | Chakwal | 71.6 |
| **3-** | Jhelum | 75.7 |
| **4-** | Rawalpindi | 78.9 |
| | 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 Rawalpindi.By proactively addressing the poor quality of drinking water in Rawalpindi, the government can alleviate the burden on healthcare facilities and improve the overall health and well-being of the community.

### 3.1.5 Poor condtion of existing facilities:

Overcrowding, Unplanned or missing Infrastructure and Deteriorating Infrastructure are some of the major challenges faced by the existing health facilities in Rawalpindi division. Following figure highlights the observations from

## 3.2 Spatial Mapping of Uncovered Areas

The Rawalpindi 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 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 25,0004 .

*Table 14: Gaps in the availability of BHUs*

| # | Districts | Existing BHUs | No. of Rural Union Councils | GAP No. of UCs with no BHUs |
|---|---|---|---|---|
| **1** | **Rawalpindi** | 100 | 40 | 86 |
| **2** | **Attock** | 62 | 19 | 19 |
| **3** | **Chakwal** | 42 | 19 | 19 |
| **4** | **Jhelum** | 42 | 8 | 8 |
| **Total** | | **246** | **86** | **132** |

**Rawalpindi Division**

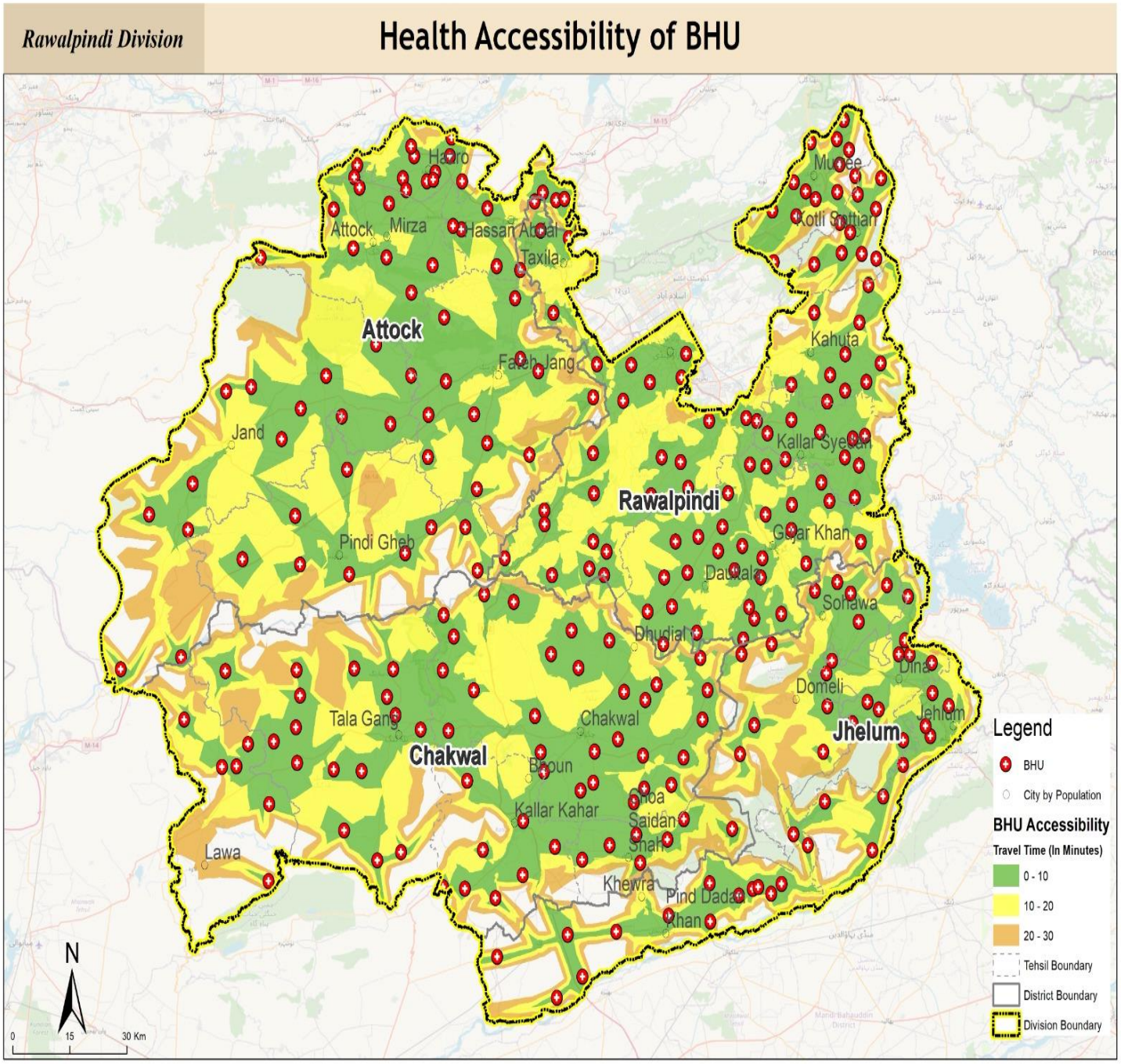



*Figure 7: Health Accessibility of BHU in Rawalpindi division*

The map illustrates BHU accessibility in Rawalpindi 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 0-20 minutes travel time.

Rawalpindi division has four districts. In Attock district, with 54 thousand population have been unserved for health facilities and about 19 UCs have no BHUs that are Golra, Sheen Bagh, Bahtar , Dhreal, Gulial, Bhallar Jogi, Formali, Kamal Pur Musa, Shinka, Tajak, Chabb, Chappri, Langar, Mithial, Nara, Thatta, Dandi, Ikhlas and Maira Sharif.

In District Chakwal, almost 83 thousands people remained unserved because UCs that don't have BHUs are; Bhekari Kalan, Bigal, Dhudial, Dhumman, Harchahar Dabb, Jabairpur, Jhand Khan Zada, Mogla, Odherwal, Thanil Kamal, Dandot, Bhoochal Kalan, Kot Qazi, Jabbi Shah Dilawar, Jhatla, Malikwal, Niraghee, Tamman, Thuha Mharam Khan 1.

Moreover, in district Jhelum, about 60 thousands people are lived in unserved areas where they don't have access to BHUs, 8 missing UCs exist in Jhelum are; Janjeel, Mughal abad, Boken, Chak Khasa, Kotla Faqir, Daulatpur, Lilla and Domeli.

Whereas, in Rawalpindi district, around 97 thousands people are unserved for health facilities and don't have access to BHUs. Most missing UCs are Doultala, Doultala-ll, Ghungrilla, Islam Pura, Jero Ratiyal, Kuri Dolal, Narali, Qazian, Hothla, Lehri Band, Ghazanabad, Kanoha, Chhajana, Phagwari, Adyala, Afandi Colony, Amar Pura, Asghar Mall, Bagga Sheikhan, Bangash Colony, Banni, Chah Sultan, Chak Beli Khan, Chak Jalal Din 1, Chak Jalal Din 2, Chaklala, Chamanzar Colony, Chountra City, Dhama Syedan, Dhoke Ali Akbar, Dhoke Babu Irfan, Dhoke Dolal, Dhoke Farman Ali, Dhoke Hassu North, Dhoke Hassu South, Dhoke Hukam Dad, Dhoke Kala Khan, Dhoke Kashmirian, Dhoke Khaba, Dhoke Mangtal, Dhoke Munshi Khan, Dhoke Naju, Dhoke Ratta, Eid Gah, F-Block Satellite Town, Fauji Colony, Gangal, Ganj Mandi, Hazara Colony, Imam Bara, Jhata Hathial, Kalyal, Kartar Pura, Khanna Dak-1, Khanna Dak-2, Khayaban-e-Sirsyed (S), Khayaban-e-Sirsyed(N), Khurram Colony, Kotha Kalan-l,Lakhan, Millat Colony, Mohan Pura, Mohri Ghazan, Morgah, Mughal, Muslim Town West, New Katarian, Pindora, Pir Wadahi, Purana Qila, Qayyumabad, Ratta Amral, Sadiqabad, Saidpur Scheme, Satellite Town, Shah Chan Chiragh, Shah Failsal, Shakrial-I, Shakrial-ii, Shakrial-lll, Waris Khan, Yousaf Colony/ Muslim Town East, Garhi Afghanan, Jalala, Khurram Paracha

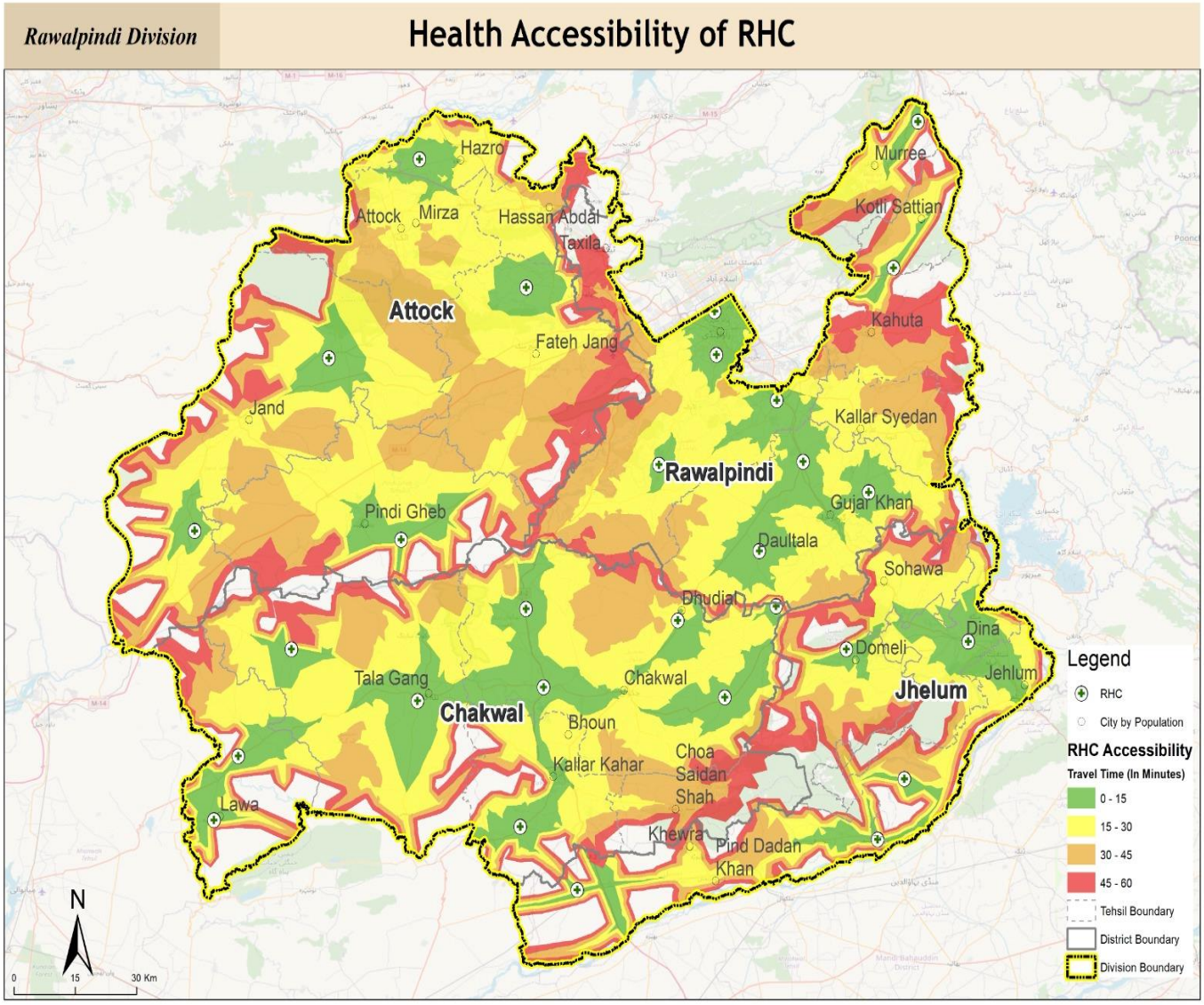



*Figure 8: Health Accessibility of RHC in Rawalpindi division*

The above map shows the number of RHCs in Rawalpindi division. In Attock district, 5 RHCs exists and 112,894 People are living in unserved areas. In district Chakwal, there are 10 RHCs and 57 Thousand people live in unserved areas who don't have access to RHCs. Whereas in Jhelum district and Rawalpindi district, 4 RHCs are there with 59516 people being living in unserved areas and 9 RHCs exists with 58694 people living in unserved areas respectively.

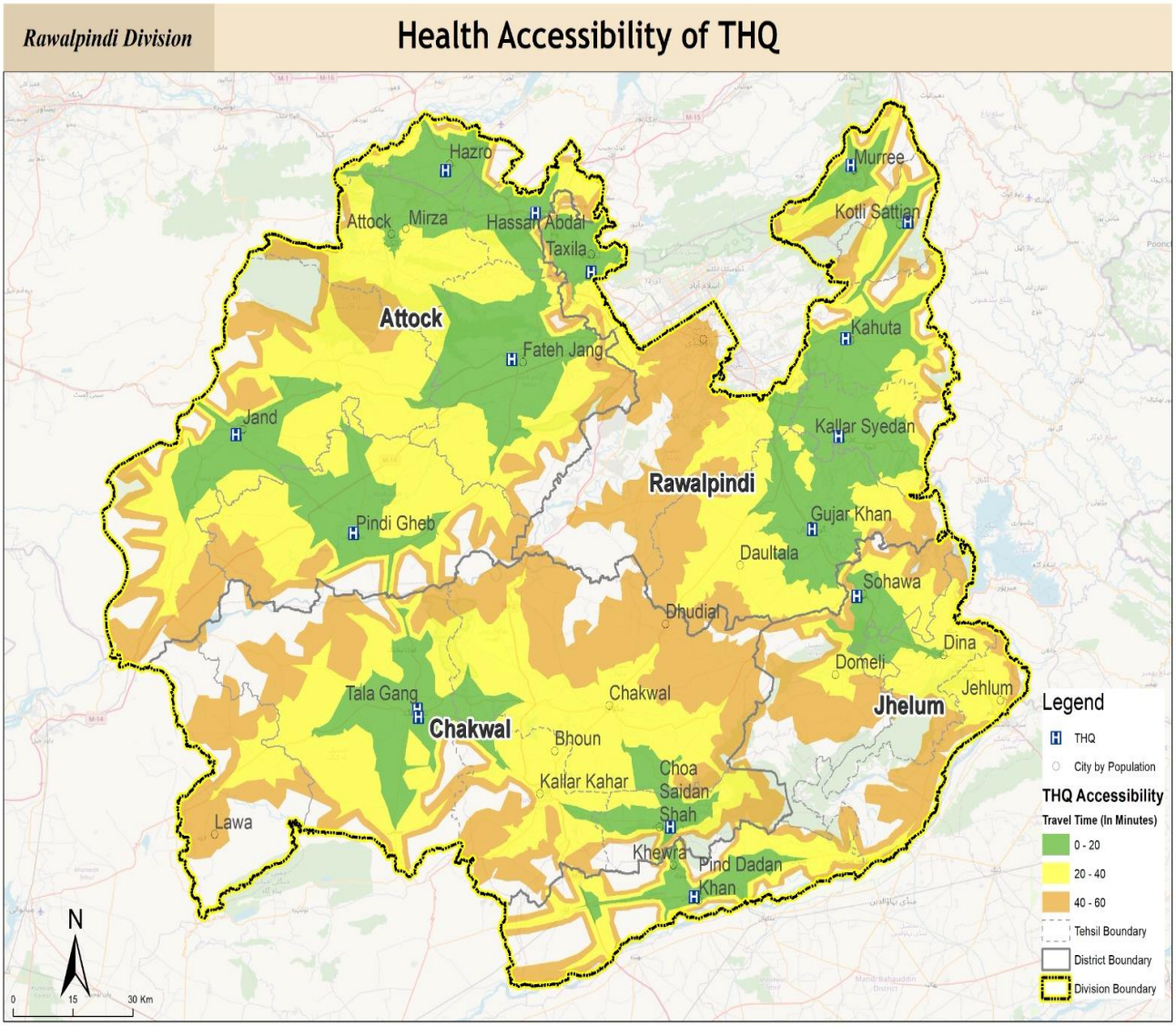



*Figure 9: Health Accessibility of THQ in Rawalpindi division*

This map shows information about THQs in Rawalpindi division and its districts. In Attock, 6 THQs are present and 62120 people are unserved for health facility. Whereas in Chakwal , 3 THQs are existed and 125809 population is unserved there.

Whereas 2&5 THQs are present respectively in district Jhelum and Rawalpindi, along with 105,490 and 1,111,550 unserved population respectively.

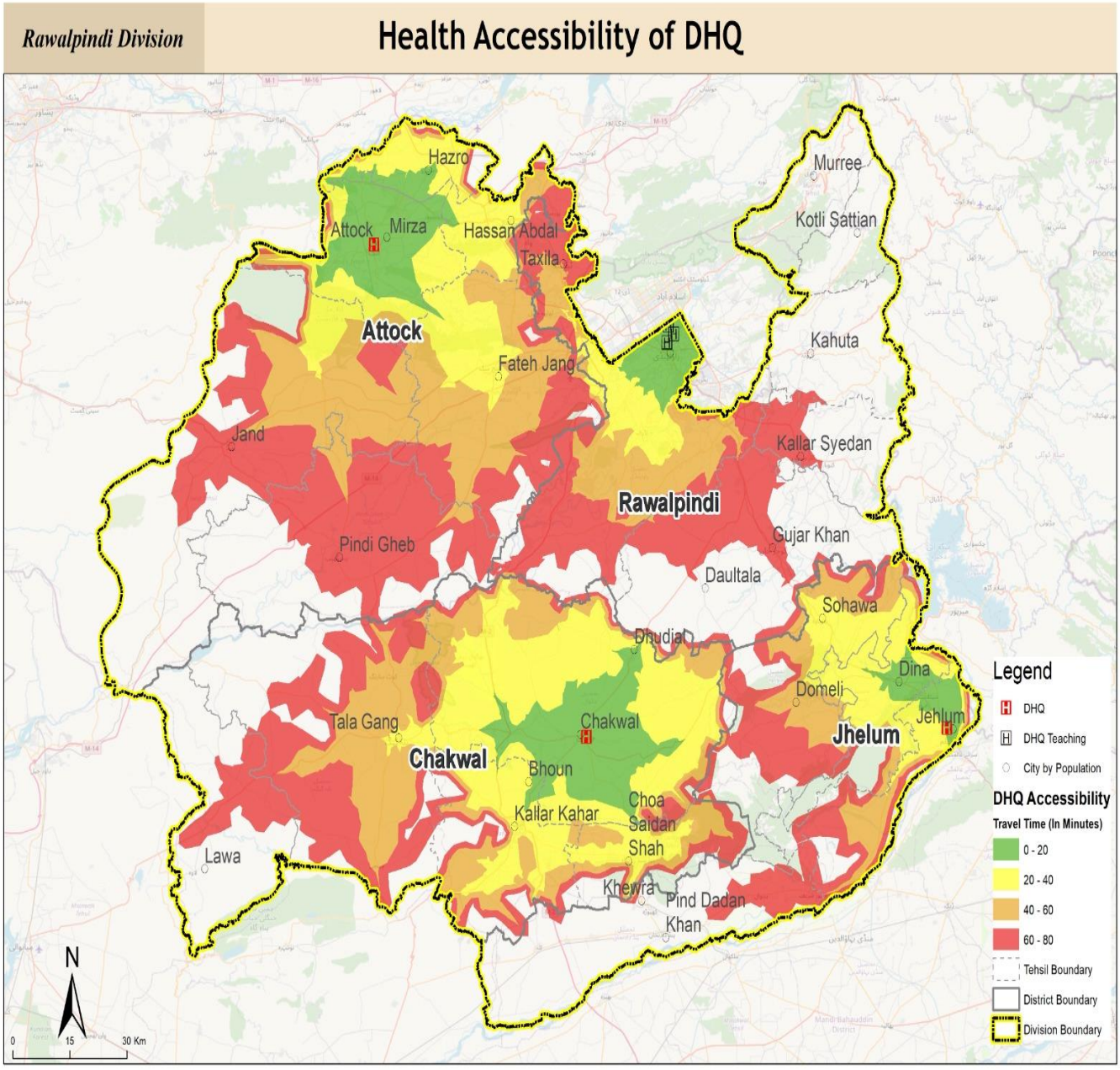



*Figure 10: Health Accessibility of DHQ in Rawalpindi division*

This map illustrates about number of DHQs present in four districts of Rawalpindi division. In Attock, Chakwal and Jhelum, each has only one DHQ whereas in Rawalpindi, there is no DHQ but only teaching hospitals.

1.6 million population in Rawalpindi are under unserved areas while 42 thousand people are being unserved in Jhelum. Whereas 0.2 million people in Chakwal and almost 0.2 million people in Attock are unserved by health facilities.

# Chapter 4: Way Forward and Proposed Interventions

- **Infrastructure Development**: Invest in infrastructure development and expansion to accommodate the growing healthcare needs of the community.
- **Equipment Procurement**: Prioritize the acquisition of essential medical equipment, including diagnostic tools, surgical instruments, and specialized machinery for different healthcare facilities.
- **Human Resource Management**: Address staffing shortages by recruiting and retaining healthcare professionals, including doctors, nurses, and support staff, to ensure adequate coverage.
- **Specialized Services**: Establish specialized medical centers, including cardio, artho, neuro, and eye centers, to provide comprehensive care to patients with specific healthcare requirements.
- **Laboratory and Diagnostic Facilities**: Upgrade and equip laboratories with modern technology to enhance diagnostic capabilities and expedite treatment decisions.
- **Medicine Supply Chain**: Implement a robust medicine supply chain management system to ensure timely availability of essential medications and prevent shortages.
- **Infrastructure Maintenance**: Regularly maintain and repair healthcare facilities, including sewage systems, to ensure a clean and safe environment for patients and staff.
- **Accessibility and Expansion**: Improve accessibility to healthcare facilities by addressing transportation challenges and expanding services to underserved areas.
- **Staff Residences**: Upgrade and provide comfortable staff residences to attract and retain healthcare professionals in remote or underserved locations.
- **Budget Alignment**: Align budget allocations with the inflation rate and reassess service delivery criteria to meet the evolving healthcare needs of the population.