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SEHAT CARD PLUS

SECOND-YEAR REPORT

on Services Utilisation (2022) under the universal population coverage conferred by the social health protection initiative

SEHAT CARD PLUS

in Khyber Pakhtunkhwa, Pakistan

Date: July 2023

Disclaimer

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PREFACE

Sehat Card Plus (SCP) programme is the flagship social health protection initiative by the Government of Khyber Pakhtunkhwa. The Government of Khyber Pakhtunkhwa extended the coverage of Sehat Card to the entire province population in 2021. This report provides a comprehensive overview of the utilisation of services under the programme.

Sehat Card Plus is a health insurance programme providing inpatient secondary and tertiary care coverage. It provides services through a network of public and private hospitals across the province. People of all genders and ages are covered, including pre-existing medical conditions. Given these basic design features, this report reflects on the utilisation stratified by regions, gender, age groups, and type of service providers.

The motto for preparing this report was that good systems are learning systems. Learning is a continuous process of introspection, reflection, and evidence-based decisions. By furnishing the data, this report will enable the programme to identify its strengths and areas for improvement. Through these reflections and iterative processes, the programme might be able to contribute toward making an equitable and responsive health system and enable it to deliver on the promise of universal health coverage.

MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

The Government of Khyber Pakhtunkhwa, through the Department of Health, is striving to make health care accessible, equitable, and responsive. Access, equity, and responsiveness are the signs of a robust health system. Through Sehat Card Plus, we have made considerable progress in making our health system responsive and robust.

Sehat Card Plus has come a long way. In 2021, the programme facilitated over half a million hospital admissions. However, this utilisation report shows more than one million hospital admissions were facilitated under the programme in 2022. This is not a small feat. The following years will see bigger and better care for the people under the initiative.

Sehat Card Plus has also institutionalized its empanelment processes, improved its provider payment rates and enhanced its regulatory oversights on service quality. It is a robust platform to improve service delivery. These developments, if seen from a strategic perspective, will improve the health statistics in the province and enhance productivity and national outcomes through a healthier population.

Dr Muhammad Riaz Tanoli
Chief Executive Officer
Sehat Card Plus
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ACRONYMS AND ABBREVIATIONS

BISP	Benazir Income Support Programme
CABG	Coronary Artery Bypass Surgery
CHE	Catastrophic Health Expenditure
DOH	Department of Health
GB	Gilgit Baltistan
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft Für Internationale Zusammenarbeit
KfW	German Development Bank
KP	Khyber Pakhtunkhwa
NHA	National Health Accounts
NSER	National Socio-Economic Registry
OOP	Out-of-Pocket
PKR	Pakistani Rupee
PMT	Proxy Means Testing
SCP	Sehat Card Plus
SDGs	Sustainable Development Goals
SHP	Social Health Protection
SHPI	Social Health Protection Initiative
SLIC	State Life Insurance Corporation
SSP	Sehat Sahulat Programme
UHC	Universal Health Coverage
WHO	World Health Organization

1. INTRODUCTION

1.1 Policy Context

According to the World Health Organization (WHO) constitution, every human has the right to attain and sustain an optimal state of health. Health, a condition of complete physical, mental, and social well-being, is attained through strong and resilient health systems. The basic functions of a health system include stewardship, resource generation, and health care financing.

The 2010 World Health Report on health care financing emphasized that achieving Universal Health Coverage (UHC) is a practical discourse in ensuring health as a human right. To achieve UHC, countries have taken various approaches from establishing National Health Services (NHS) to institutionalising Social Health Insurance (SHI) models. Some countries, including Pakistan, have taken the middle way of a mixed health system with elements of the NHS and the SHI approaches.

Historically, Pakistan has spent a meagre percentage of its Gross Domestic Product (GDP) on health care. In 2018-19, Pakistan's expenditure on health care was 3.38% of the GDP. Public sector expenditure on health was 1.2% percentage points, with an Out-of-Pocket (OOP) expenditure of about 60%. Such a high OOP caused catastrophic health expenditure and necessitated social health protection initiatives to protect the vulnerable population.

Given low public health expenditure, high OOP expenditure, and widespread poverty, the Government of Khyber Pakhtunkhwa (KP) launched the Sehat Sahulat Programme (SSP), which is now referred to as Sehat Card Plus (SCP), at the end of 2015. SCP envisaged improving the population's health status and reducing poverty by reducing OOP expenditure. It initially covered 21% poorest of the poor in four districts (Chitral, Kohat, Malakand, Mardan) and extended to all residents of KP in phases. Since its inception, it remains 100% subsidised by the government and has been administered by Pakistan's State Life Insurance Corporation (SLIC).

Under the programme, approximately 9.85 million families of KP are targeted for free inpatient health care services. The premium paid to SLIC is fixed per family, which includes the head of the family, spouse and unmarried children and has no limit on size. The programme's annual cost is approximately PKR 34 billion.

1.2 Initiation of the Programme

SCP was established as a micro-health insurance programme set up as a partner-agent model. The government of KP designed the programme and paid a premium to SLIC—the implementing partner selected through national competitive bidding—on behalf of the beneficiaries for delivering inpatient health services.

SCP provides inpatient health care services in selected public and private hospitals for a range of secondary and tertiary health services for up to one million PKR per family on a cashless basis. It also covers transportation costs in certain conditions.

2. EVOLUTION OF THE PROGRAMME

2.1 Phase 1 of SCP

SCP was launched on 16 December 2015 in four districts of KP. It enrolled households based on a poverty census provided by the National Socio-Economic Registry (NSER) of the Benazir Income Support Programme (BISP), a national cash-transfer programme in Pakistan. NSER conducts a nationwide poverty scorecard survey to calculate the population's financial status through the Proxy Means Test (PMT). Families with a PMT score of 16.17 or less, making them 21% poorest of the poor in the four districts of KP, were identified as eligible in the first phase.

The eligible families needed to be enrolled before using health services under the programme. SLIC was responsible for running enrolment drives on union council levels and information campaigns on SSP utilisation. The beneficiaries were provided with health insurance cards. The health cards carried a unique identifier for each enrolled family and were mandatory to produce at the time of utilisation.

The Federal Republic of Germany financially and technically supported the first phase of the programme through the German Development Bank (KfW). KfW financed 88% of the PKR 1.4 billion costs of premiums. The Government of KP paid the remaining 12% of general tax revenues.

Services were limited to inpatient secondary health care services and were provided at selected public and private health facilities. The household size was capped at a maximum of 7 members, and the annual financial coverage was PKR 25,000 per person annually on a cashless basis.

2.2 Phase 2 of SCP

In August 2016, the programme was extended in population, financial and services coverage. It was extended to all districts of KP. The PMT score for eligibility was raised to 24.5, making 51% of the population eligible for the programme.

Limited tertiary health care services were introduced, along with wage replacement, maternity and tertiary care transportation, burial allowance, and a one-time follow-up OPD (Outpatient Department) voucher. The household size was increased to 8 people. The financial coverage for secondary care was increased to PKR 30,000 per person annually, and PKR 300,000 per household per annum was provided for newly introduced tertiary care.

The programme's annual cost was PKR 5.4 billion, financed entirely by the Government of KP. From phase 2 onwards, the Government of KP bears the financial cost of the programme.

2.3 Phase 3 of SCP

Phase 3 of the SCP was started at the end of November 2021. The PMT score for eligibility was increased from 24.5 to 32.5 making 69% of the population eligible under the programme. The financial coverage remained the same as in phase 2. However, the definition of enrolment unit changed from household to family. A household could include multiple families. The family composition was defined as husband, wife, and unmarried children. The size limit on the enrolment unit was abandoned. A family of any size was entitled to PKR 240,000 for inpatient secondary care and PKR 300,000 for inpatient tertiary care.

2.4 Phase 4 of SCP

Phase 4 of the programme brought several developments. Announced in August 2020, it expanded coverage to all residents of KP, irrespective of their financial status. The scheme's roll-out to the 100% population of KP was completed on 01 February 2021, with the brand name revised from 'Sehat Sahulat Programme' to 'Sehat Card Plus'.

The financial coverage has been increased up to PKR 1 million per family. The tertiary care services have been enhanced, including breast cancer screening, management of neurological diseases and prostheses.

Sehat Card, which was mandatory to show at the time of admission, is replaced with a Computerized National Identity Card (CNIC). CNIC is issued by the National Database and Registration Authority (NADRA). It has a unique citizen identification number and is the legal authentication document for Pakistani citizens aged 18 years or above.

Using CNIC as a health card facilitated the enrolment process. Instead of running an enrolment drive across districts in previous phases, NADRA provides family details to SLIC. It eliminated the chances of missing out on enrolment and facilitated upgrading of family trees.

3. FROM SEHAT SAHULAT TO SEHAT CARD PLUS

3.1 The Rationale for Universal Population Coverage

The Government of KP has extended coverage to the entire population to promote equity. The entire population has access to a basic benefit package, a hallmark of the transition towards UHC. The 100% population coverage has also eliminated the inclusion and exclusion errors reported with the NSER data. The 100% population coverage now offers an opportunity to move towards comprehensive coverage, in which the population would be expected to contribute to enhancing their benefit package.

3.2 Key Aspects of the Coverage

The programme covers secondary and tertiary care services. Secondary services are provided at the district level, by the district headquarter hospitals or through private providers who meet predefined empanelment criteria. The tertiary care services are provided by the public sector teaching hospitals or their equivalents in the private sector. The basic features of the treatment package are provided in Table 1.

Table 1 **Benefits package and limits of financial coverage**

Treatment Package	Coverage under Sehat Card Plus
Secondary Care	
Initial coverage for secondary care (basic treatment)	**200,000** PKR per family per year
Secondary care (basic treatment)	• Ear, nose and throat surgeries • Fractures and injuries. • General medicine admissions • General orthopaedic services • General surgical interventions • Maternity services (Normal deliveries, C-section). • Ophthalmology services requiring admissions • Paediatric admissions
Tertiary Care	
Initial coverage for tertiary care (advanced treatment)	**400,000** PKR per family per year
Additional coverage for tertiary care	**400,000** PKR per family per year
Tertiary care (advanced treatment)	• Accident and emergency • Artificial limbs (Prosthesis) • Breast cancer screening • Cancer treatment (Chemo, Radio, Surgery) • Cardiovascular (Angioplasty, bypass) • Diabetes • Intensive care • Kidney diseases (Dialysis) • Kidney transplant • Management of neurosurgical diseases
Total coverage for treatment	Up to **1,000,000** PKR per family per year

3.3 Coverage Portability

Besides generous treatment packages, patients from KP can get treatment in hospitals outside KP that are on a panel in the Federal Sehat Sahulat Programme. The federal SSP, launched on a pattern similar to the KP programme, is funded by the Federal Government of Pakistan and administered by SLIC. The same insurance company in both programmes provides inter-provincial portability for beneficiaries to access services in any panel hospital across Pakistan. Currently, SLIC has around 1,000 hospitals on its panel across Pakistan.

3.4 Steps in the Patient Journey under the Sehat Card Plus

There is a clear-cut admission authorization and follow-up model under the programme. This entire process is described in a stepwise manner as follows:

Step 1: The patient's eligibility is checked.

- The patient visits the SCP programme counter to check their eligibility. The patient-HFO interaction involves CNIC or Form B as input.
- If the patient is covered, a system-generated referral letter is provided, and the patient visits the hospital OPD/emergency.

Step 2: Patient visits a doctor in the outpatient/emergency room (referral form is filled)

- The patient takes the referral letter, makes an OPD slip, visits the doctor, undergoes examination and lab tests, and if admission is needed, the referral letter is filled by the doctor and returned to the HFO by the patient.
- The patient's diagnosis paper and proposed treatment/surgical procedure are written on the OPD paper. The same details are to be entered on the referral form for the insurer's record.
- If the patient does not need hospital admission, the patient will absorb the consultation fee and lab cost. The hospital would refund all the patient's expenditure if admission was advised, as SCP envisaged these expenses as part of the package rates.

Step 3: The patient is admitted through the hospital's admission office and the SLIC database.

- The patient takes the OPD slip and referral letter to the hospital admission office. The admission is processed, the patient chart is prepared, and a bed is allocated.
- Concurrent with the hospital admission, the patient is also admitted to the inpatient list of the SLIC database.

Step 4: The patient gets treatment at the hospital.

- The patient is now under the care of the inpatient medical team.
- All treatment would be provided at zero cost to the patient against a package rate agreed between the insurer and the hospital.
- The package rate would include all charges, excluding transportation costs, pertaining to a particular treatment/procedure (up to the cost of the general ward), including registration charges, admission charges, accommodation charges, cost of medicines, labour room, operation /procedure charges, anaesthetist charges, nursing and paramedic charges, doctor/consultant visit charges, monitoring charges, operation theatre charges, cost of the implant, procedural charges/surgeon's fee, cost of disposable surgical material and cost of all sundries used during hospitalization, related routine investigations, physiotherapy charges etc. from the time of admission till discharge. This also includes all sub-procedures

and all related procedures to complete the treatment.

- The package rate will also include all complications related to the treatment procedure performed, one post-discharge follow-up visit in maternity and surgical cases and pre-and-post hospitalization medicines up to 1 day before hospitalization and up to 5 days from the date of discharge from the hospital.
- The DMO would visit the admitted patients to ensure that good quality medical care was being provided.
- Deciding the treatment is the sole prerogative of the hospital.

Step 5: The patient is discharged from the hospital and the insurance database.

- After the treatment is complete, the patient is discharged and provided with the clinical team's discharge summary/slip. The discharge summary contains medicines prescription for home care.
- As part of the package rate, patients get medicines for five days on discharge. The patient is also entitled to one free follow-up checkup.
- The patient presents the hospital discharge slip to the HFO. The HFO prints a system-generated discharge summary from the insurance database.
- The patient is informed about the remaining balance and provided a feedback form. The patient fills out the feedback form and gives it back to the HFO.
-

Step 6: The patient gets a call from NADRA.

- Upon discharge, the patients get a phone call from NADRA. The NADRA provides a third-party service to the programme.

Step 7: Claims are prepared jointly by the HFO and hospital representative.

- A hospital representative provides copies of all the clinical records to the HFO.
- The hospital provides a cover letter with the documents to the HFO.
- The HFO prints a system-generated claim sheet and attaches all the documents with it.

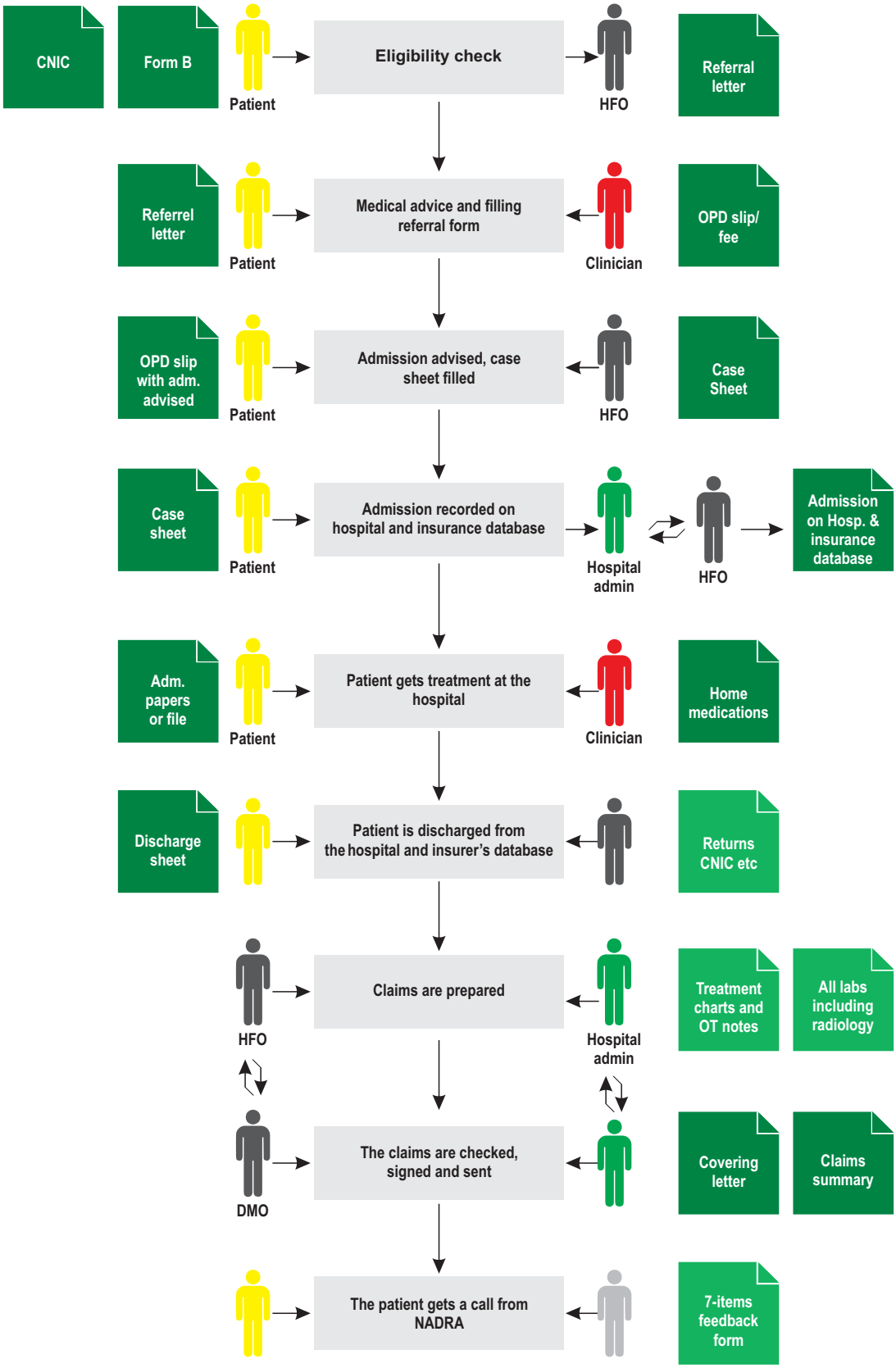
Step 8: The claims are checked and signed.

- The HFO presents the claims to the DMO for checking and signing.
- Both the HFO and the DMO put their signatures and stamps on each claim.

Step 9: The claims are sent to the head office.

- After the claims are checked and signed by the HFO and DMO, the claims are sent to the insurer's zonal office by the hospital.

Figure 1 Mapping of the hospital-based processes



4. SECOND ANNUAL REPORT UNDER THE UNIVERSAL COVERAGE

With the completion of the second year of providing universal coverage to the entire population of KP, the programme deemed it necessary to analyse the utilisation data, identify the strengths, look for weaknesses, and reflect on the experience to improve the programme. The following pages describe the second year of experience (2022) with 100% population coverage.

Table 2 provides a comparison of services utilisation between 2021 and 2022. In 2022, there were 1,130,733 hospital admissions, with 795,466 unique patients (considering only one admission per person throughout the year). Compared to 2021, the total number of admissions increased by 107.5%, and the number of unique patients increased by 102%. Both admissions and associated costs doubled in 2022 compared to 2021.

Two key observations emerged from the year-on-year comparison. First, the share of admissions and claim costs for the public sector rose, increasing from 31.6% to 34.7% for admissions and 29% to 35.2% for claims. There was a 146% increase in public sector claims costs compared to an 85.6% increase in the private sector. This suggests a gradual shift towards the public sector, with further growth anticipated in the next years. Second, female admissions exceeded male admissions in both years. In 2022, female utilisation witnessed a notable surge, further widening the gap compared to males. Additionally, female claims costs surpassed male claims costs in 2022, marking a shift from the previous year.

Table 2 Overview of the year-on-year comparison

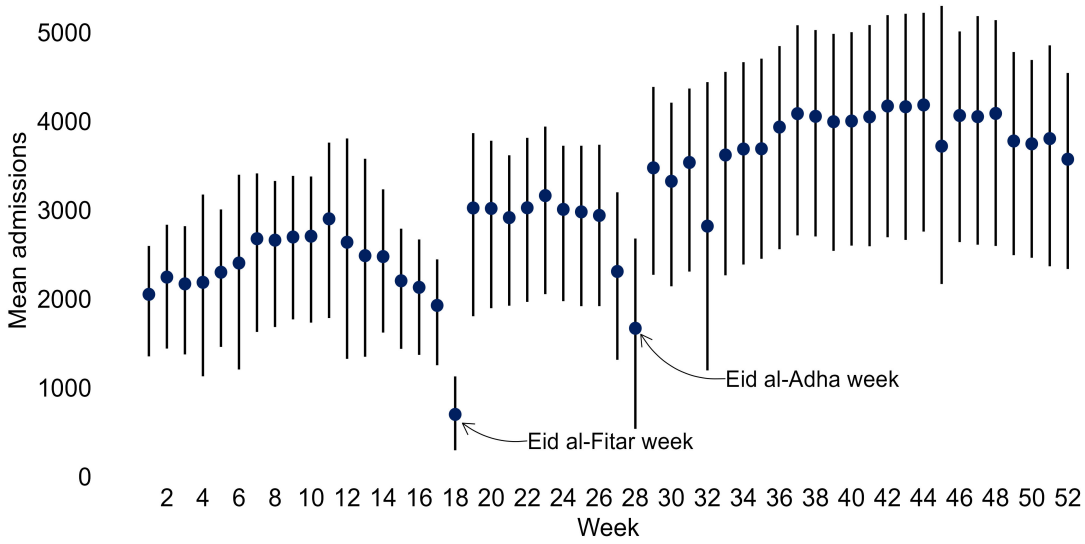
	2021		2022		Change
	Count	Percent	Count	Percent	
Admissions					
Total admissions	544,841	—	1,130,733	—	107.5%
Unique patients	393,680	—	795,466	—	102.1%
Facility type					
Public	171,917	31.6	392,608	34.7	128.4%
Private	372,924	68.4	738,125	65.3	97.9%
Coverage type					
Secondary	311,306	57.5	609,720	54.3	95.9%
Tertiary	230,085	42.5	514,040	45.7	123.4%
Gender type					
Female	284,227	52.2	615,946	54.5	116.7%
Male	260,614	47.8	514,784	45.5	97.5%
Expenditure	**Million PKR**		**Million PKR**		
Total expenditure	13,879	—	28,203	—	103.2%
Facility type					
Public	4,035	29	9,932	35.2	146.2%
Private	9,844	71	18,271	64.8	85.6%
Coverage type					
Secondary	5,194	37.4	10,732	38.1	106.6%
Tertiary	8,684	62.6	17,471	61.9	101.2%
Gender type					
Female	6,676	48.1	14,391	51	115.6%
Male	7,203	51.9	13,812	49	91.8%

4.1 Weekly Admissions

Admissions under the programme have been seeing an upward trend since its launch. This upward trend is attributed to several factors, including increased awareness over time, allowing more people to learn about the programme, an increase in the eligible population, expansion of the programme's financial coverage and services, and improved accessibility in remote areas.

Figure 2 shows the weekly mean admissions with a 95% confidence interval for the year 2022. It depicts a general upward trend, with some fluctuations. Dips in admissions occurred during weeks 18 and 28, coinciding with the Eid al-Fitar and Eid al-Adha festivals, respectively. The wide confidence interval is caused by the low admission rates on Sundays.

Figure 2 Weekly admissions under SCP

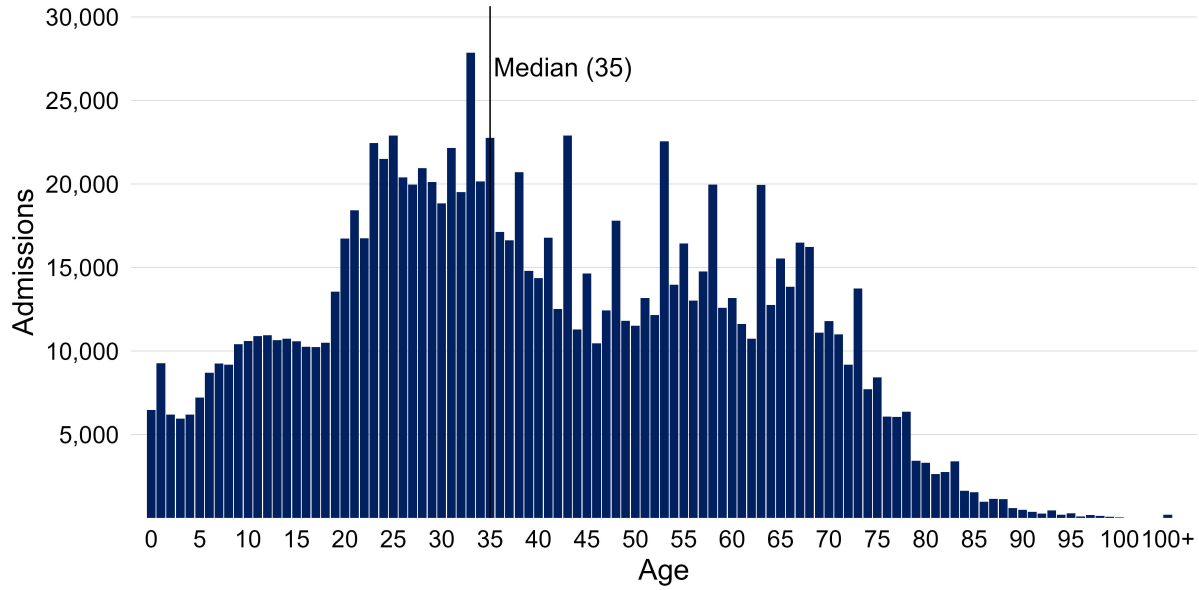


4.2 Utilisation by Age and Gender

4.2.1. Admissions by Age

In 2022, the patient age distribution showed a peak in the 20s and 30s, with a median age of 35 (Figure 3). This pattern was influenced by the need for pregnancy-related care among women. Compared to 2021, there was a noticeable increase in admissions for children aged 1-2 years.

Figure 3 Age distributions of patients treated under SCP

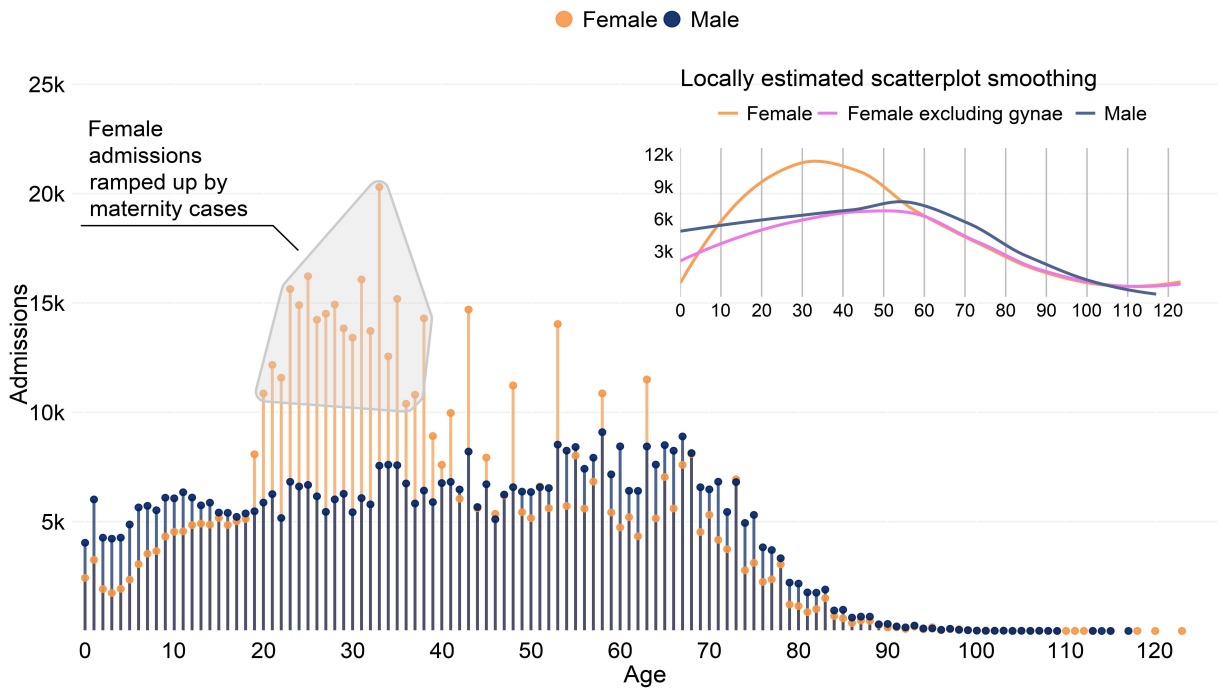


4.2.2 Admissions by Age, Stratified by Gender

Figure 4 shows the age distribution of patients, categorized by gender. Females aged 20-40 showed a significant jump in hospital admissions. This increase was primarily driven by maternity cases, a trend commonly observed in various insurance programs.

Male admissions experienced peaks in the mid-50s and mid-60s. Despite the generally young population profile of the province, the consistent admissions frequency throughout the 50s to mid-70s indicates a relatively high utilisation among older male adults. A subplot of Figure 4 shows a scatterplot smoothing for the age distribution of females, with and without maternity cases, and males. It depicts that excluding maternity services, utilisation by males exceeded females for almost all ages.

Figure 4 Admissions by age, stratified by gender

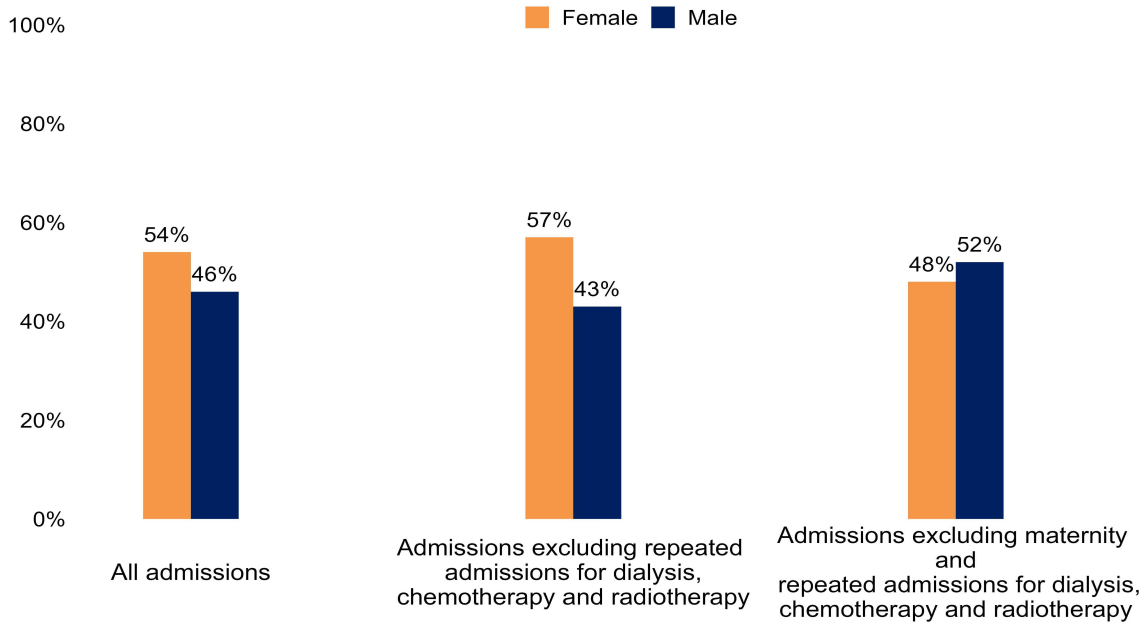


4.2.3 Admissions by Gender Excluding Repeated Cases and Maternity Care

The SCP covers dialysis and chemotherapy services, which are required by patients on an ongoing basis, particularly dialysis. Although the number of patients seeking these treatments is relatively small, their frequent admissions make up a significant portion of the total. For example, a few male dialysis patients can distort the overall male-female admission ratio. Similarly, this can obscure the proportion of admissions between public and private facilities with secondary and tertiary care. To counter this, frequently sought treatments by patients within a year, such as dialysis, chemotherapy, and radiotherapy, were counted only once in some parts of this report.

In 2022, out of the total admissions, 54% were for females and 46% for males. When repeated admissions were excluded, the female share increased to 57% (Figure 5). This increase points towards the significant number of dialysis admissions by male patients, influencing the initial gender share. To observe whether maternity cases, although a crucial aspect of female health care, affected the gender ratio, excluding such cases revealed that the female share remained substantial at 48%.

Figure 5 Admissions excluding repeated cases and maternity care

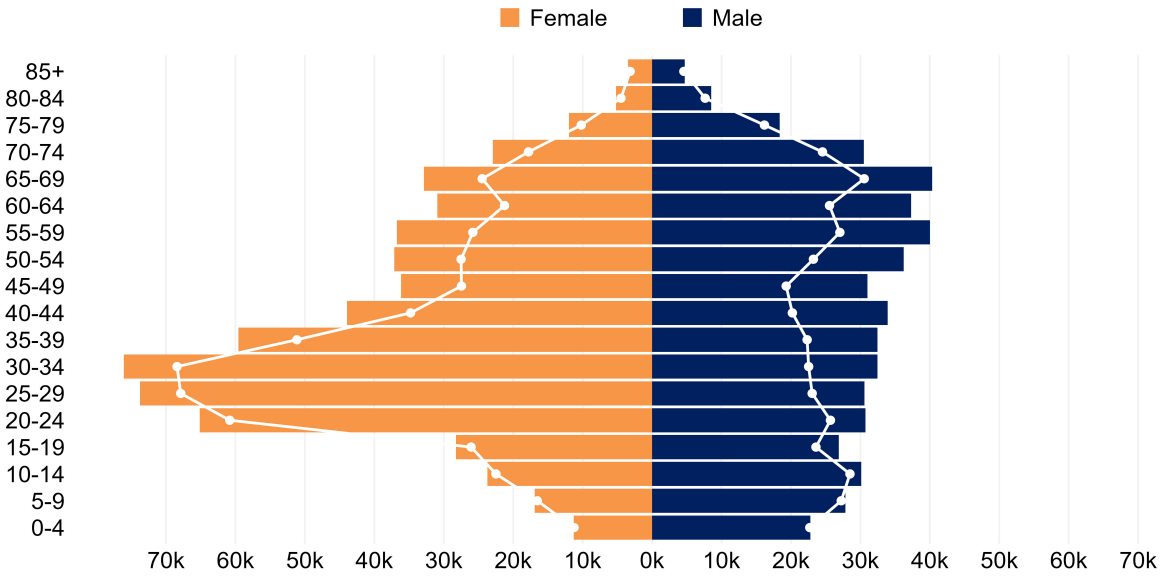


4.2.4 Admissions by Age group, Stratified by Gender

Figure 6 illustrates hospital admissions across age groups and genders. Females showed a peak in admissions during their 30s (30-34 age group). For males, it appeared in the 65-69 age group, similar to the findings in Figure 4. There was a higher utilisation of services for young boys compared to girls in the paediatric age group. Although the programme provides equal access and coverage to both genders, the social and institutional factors behind this phenomenon needs to be explored and addressed.

The white lines and dots in Figure 6 indicate admissions excluding repeat cases of dialysis and cancer treatment. This reveals a different pattern than the total admissions data and shows higher female utilisation compared to males in most age groups. This suggests repeat cases, particularly dialysis, significantly contribute to the observed difference in overall utilisation between genders. However, it is worth noting that it does not indicate higher female utilisation in general, as it does not account for the male-to-female ratio in the population.

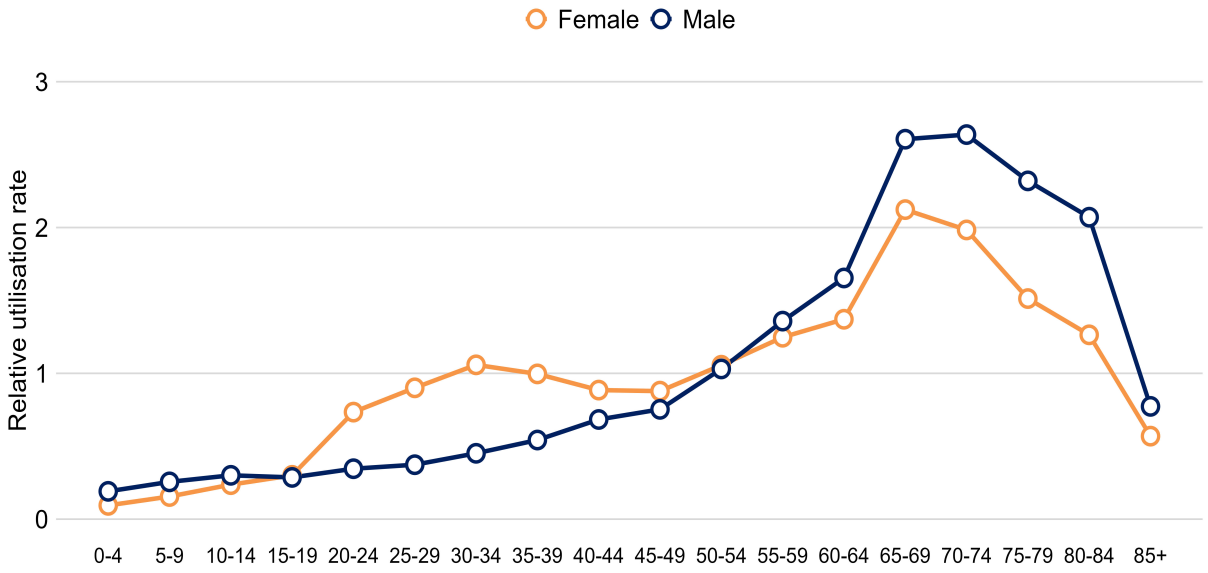
Figure 6 Admissions by age group, stratified by gender



Figures 4 and 6 present admission patterns in absolute terms without considering the general population's age distribution. The KP population heavily skews towards younger age groups, portraying a pyramid structure with a broad base that narrows with increasing age. Integrating this demographic data into the analysis provides a more nuanced understanding of utilisation across age groups.

Accounting for the population's age distribution, the pyramid structure, Figure 7 illustrates the relative utilisation rate for each age group, calculated as the individual group's rate divided by the average rate across all groups. It shows a similar pattern. Females in the reproductive age groups had higher utilisation compared to males. In the age groups 55-59 to 80-84, the utilisation remained high compared to younger age groups. However, within these groups, females showed underutilisation. This pattern stays the same with and without repeat admission cases and is consistent with the observations from 2021.

Figure 7 Utilisation rate relative to average rate, stratified by age group

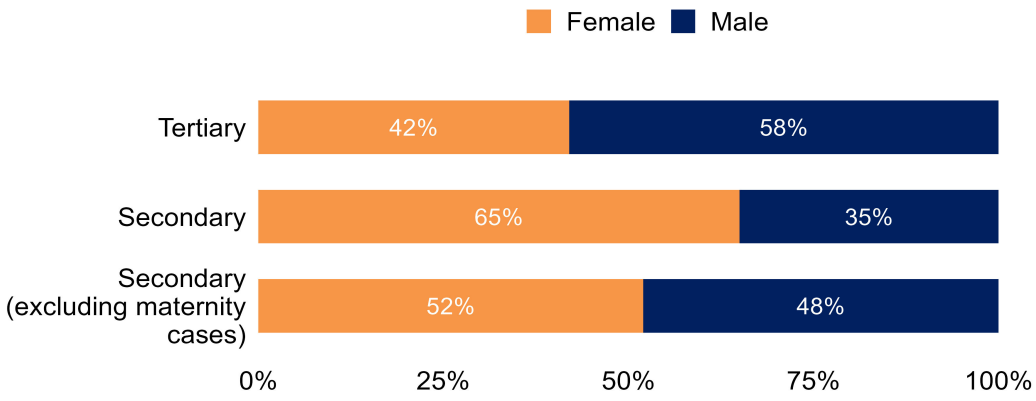


4.3. Utilisation by Gender and Type of Coverage

4.3.1 Admissions by Gender and Coverage Type

Admissions under the programme are categorized into secondary care and tertiary care. Figure 8 shows the gender and care-wise distributions, both with and without maternity services. A gender reversal was observed in the type of care utilized: tertiary care admissions were higher for males (58%), while secondary care admissions, conversely, were higher for females (65%), predominantly due to maternity cases. This reflects the program's commitment to providing essential and emergency health care services to women and their newborns through skilled birth attendants, thus reducing the risk of maternal and neonatal mortality.

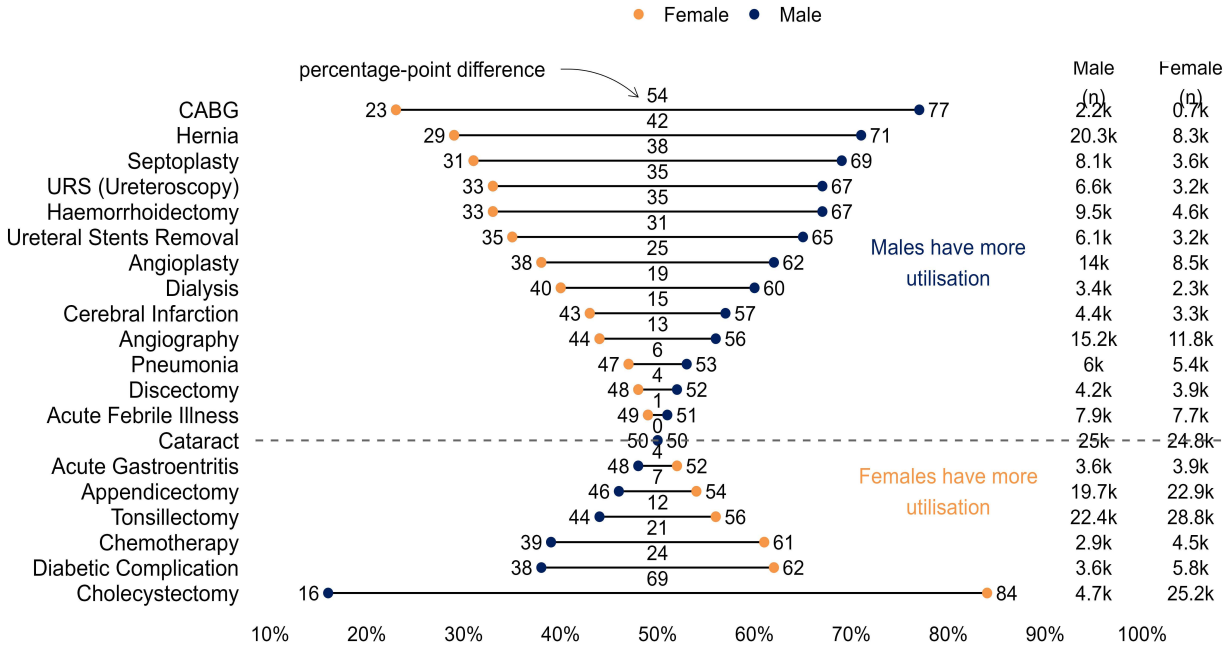
Figure 8 **Admissions by gender and coverage type**



4.3.2 Gender Differences in Utilisation of Selected Treatments

The programme offers multiple treatment services. The twenty most utilized treatments were selected and analysed to observe the utilisation share by gender, as shown in Figure 9. This figure provides the percentage share of each treatment by gender and depicts the percentage-point difference between male and female admissions. The right-side columns present the gender-wise admissions in absolute terms. The length of the lines between the dots indicates the percentage-point difference in utilisation. Cardiology-related treatments such as CABG (77%) and Angioplasty (62%) were commonly sought by males. In treatments such as Cholecystectomy, Diabetic complications, Chemotherapy, Tonsillectomy, Appendicectomy, and Acute gastritis, females outnumbered males.

Figure 9 **Gender differences in utilisation of selected treatments**



4.4. Admission Patterns Based on Hospital Ownership

4.4.1 Changes in the Number of Empanelled Hospitals Since 2016

The programme empanels public and private hospitals that meet the criteria. With the programme's expansion, the number of panel hospitals has increased. Figure 10 shows the trend in empanelled hospitals from 2016 to 2022, showing a consistent rise from 18 in 2016 to 197 hospitals in 2022. Majority of these hospitals are privately owned (Figure 11). In recent years, many hospitals from remote areas have been added to the panel, contributing to geographical equity in service utilisation.

Figure 10 Trends in hospitals empanelment (2016-2022)

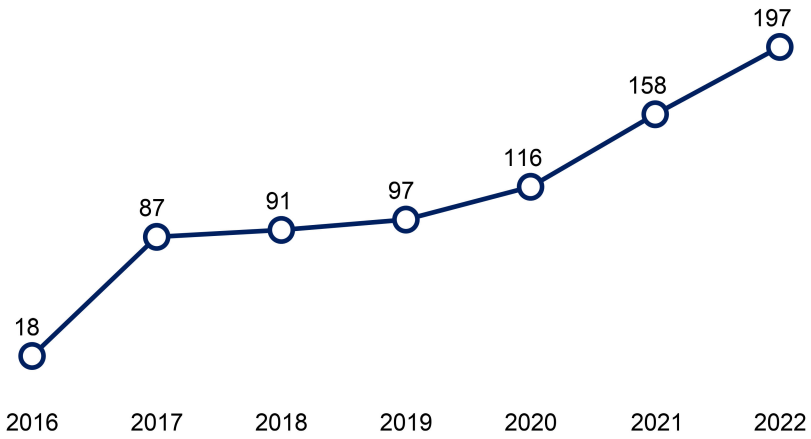
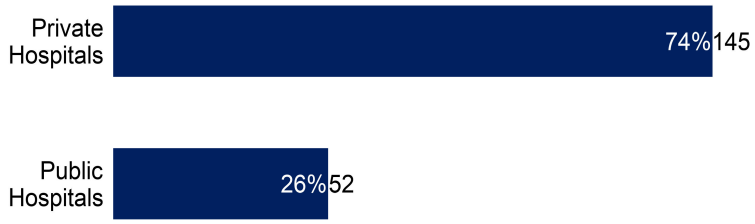


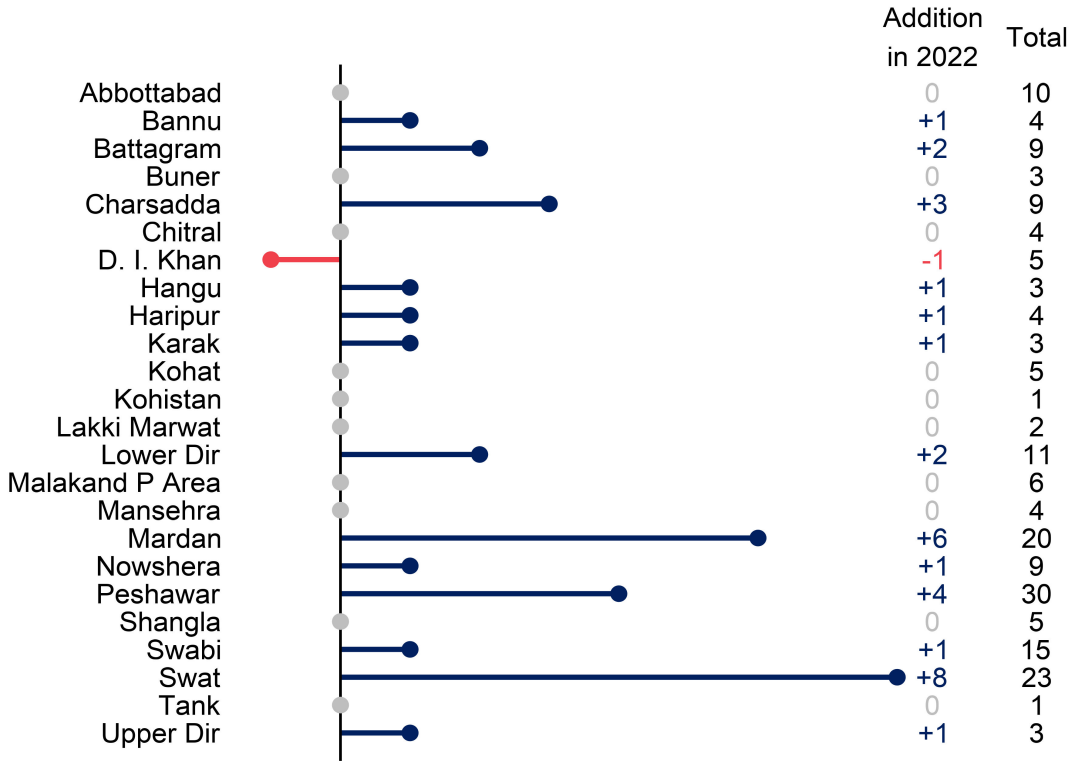
Figure 11 Empanelled hospitals in KP



The number of empanelled hospitals fluctuates due to routine monitoring of service quality by SLIC. Hospitals that fail to provide quality patient care, maintain qualified staff, or do moral hazard are suspended until the reservations are resolved or dropped from the panel.

Peshawar, the provincial capital, has the highest number of empanelled hospitals (30), followed by Swat (23) and Mardan (20). In addition to serving residents within the district, these hospitals also received patients from nearby districts, resulting in relatively high admissions. Figure 12 shows the addition of hospitals to the panel within the districts in 2022.

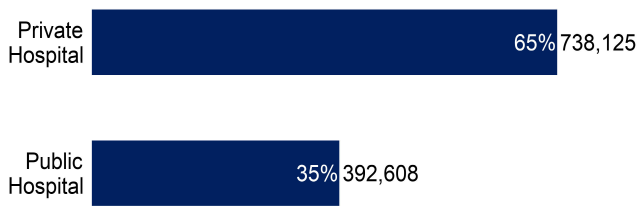
Figure 12 Addition in empanelled hospitals



4.4.2 Admissions by Hospital Ownership

Services can be availed at empanelled hospitals outside KP, where similar programmes are implemented by other administrative units. A total of 860 hospitals appeared in the 2022 utilisation data, of which 197 were in KP. Admissions outside KP accounted for approximately 6.4% (72,039) of the total admissions and were more likely due to KP residents living outside the province rather than travelling to seek specialized care. Majority of these cases were related to dialysis, with most being sought in Islamabad and Rawalpindi.

Figure 13 Admissions in public and private hospitals



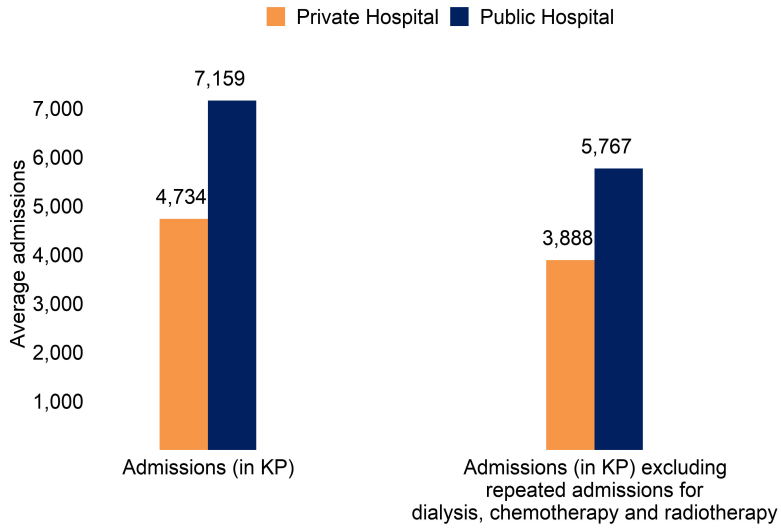
Of the 197 hospitals in KP, 145 (74%) were privately owned and 52 (26%) were government-owned. The share remained unchanged from the previous year. In line with the number of hospitals, service utilisation in the private sector remained higher (65% of the admissions) than in the public sector (35%) (Figure 13). There was a slight decrease in the proportion of admissions to private facilities, dropping from 68% in 2021 to 65% in 2022.

However, there was a marked difference in the average number of admissions between public and private facilities. It's worth noting that public facilities do not necessarily bear a higher burden than

private facilities because public-sector hospitals typically have greater bed capacity than private-sector hospitals. Considering the bed capacity, the average admissions in the public sector may be lower. Public hospitals had an average of 6,954 admissions, whereas private hospitals had an average of 4,732 (Figure 14). Excluding the repeated cases, average admissions decreased by 1,362 in the public sector and 846 in the private sector, indicating an increased burden of repeated admissions in the public sector.

In comparison to 2021, the average admissions per hospital increased by 56% in the private sector and 75% in the public sector in 2022.

Figure 14 Average admissions by hospital ownership



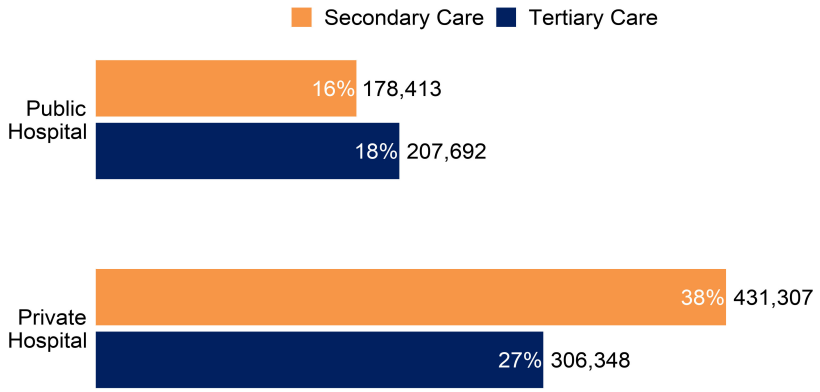
4.4.3 Admissions by Hospital Ownership and Coverage Type

In total, admissions for secondary care (55%) exceeded those for tertiary care (45%). Categorizing by hospital ownership, it was observed that both types of care were predominantly provided in the private sector (Figure 15). Compared to 2021, there was a slight increase in the share of admissions for secondary and tertiary care in the public sector, rising from 14% to 16% and from 17% to 18%, respectively.

In the public sector, admissions for tertiary care were more than those for secondary care. On the contrary, in the private sector, there was a significant lead in secondary care over tertiary care. This observation is consistent with the previous year, 2021.

Tertiary care admissions in the private sector, constituting 37% of all admissions, included a notable portion of dialysis cases. The public sector also constituted a decent portion of dialysis cases along with chemotherapy, which is available only in public empanelled hospitals. Excluding the repeated dialysis and chemotherapy cases widened the gap between tertiary and secondary care in the private sector, reaching a difference of 28 percentage points.

Figure 15 Admissions by the type of hospital ownership

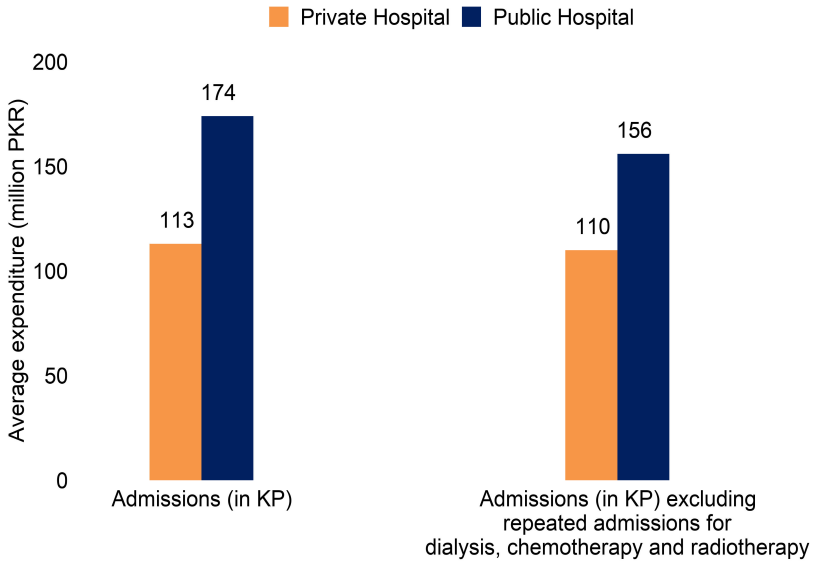


4.4.4 Claims Costs by Hospital Ownership

In 2022, the total claims cost amounted to 28,203 million PKR, up from 13,879 million PKR in 2021, reflecting an increase of 103%. The public sector constituted 35.2% (9,932 million PKR) of the total claims cost, up from 29% (4,035 million PKR) in 2021, an increase of 146% compared to 85.6% by the private sector.

The average per-hospital expenditure in the private sector was PKR 113 million, whereas in the public sector, it was PKR 169 million (Figure 16).

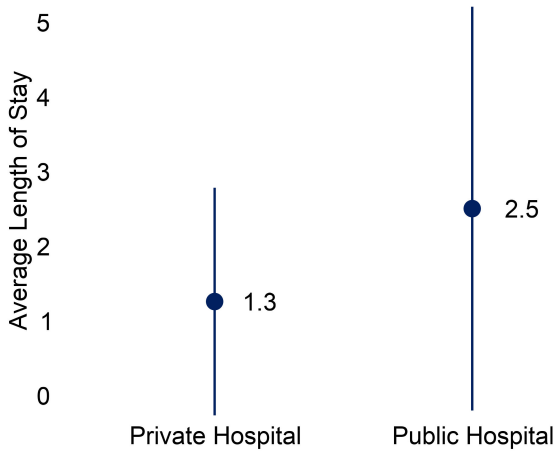
Figure 16 Average expenditure per hospital



4.4.5 Average Length of Stay (ALOS) by Hospital Ownership

In some cases, admissions were not properly closed in the system, leading to large differences between admission and discharge dates and thereby, imprecise calculation of Average Length of Stay (ALOS). This issue was more prevalent in the public sector. Excluding admissions that lasted less than a day, such as dialysis and chemotherapy, the ALOS is depicted in Figure 17. The ALOS in the private sector (1.3 days) was shorter than in the public sector (2.5 days). The longer stay in the public sector could be attributed to a significant share of tertiary care in public hospitals, whereas in the private sector, secondary care had a higher share.

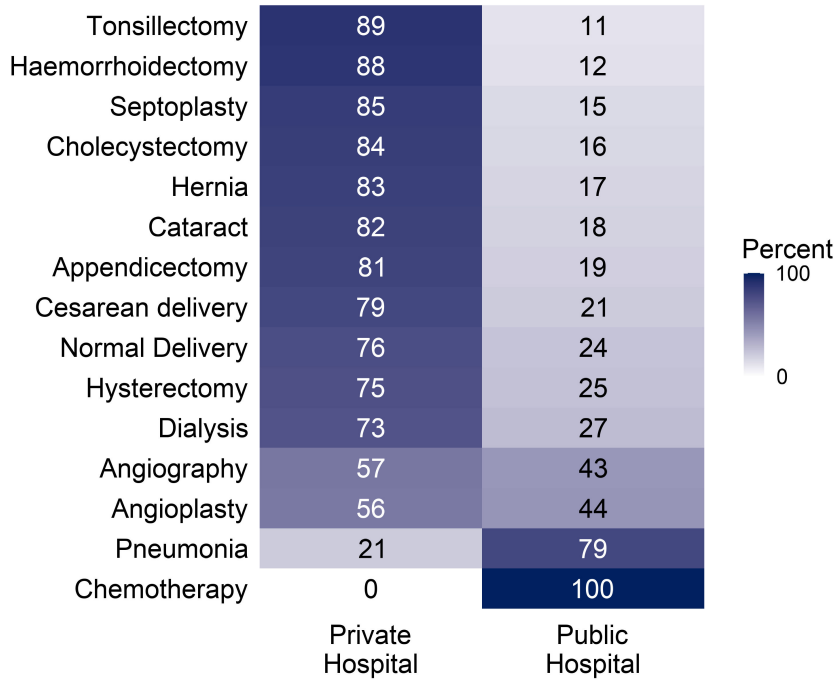
Figure 17 Average length of stay in public and private hospitals



4.4.6 Frequent Treatments in Public and Private Hospitals

Private facilities administered more secondary care admissions than public facilities. To further examine the breakdown by treatment, percentage shares by facility ownership were calculated for the 15 most utilized treatments (Figure 18). As shown in the figure, out of 15 treatments, most were predominantly performed in private hospitals. For example, the private sector had the largest share in tonsillectomy (90%), followed by hemorrhoidectomy (88%) and Septoplasty (85%). Among the top 15 treatments, only pneumonia was primarily treated in the public sector, with chemotherapy exclusively available in public facilities.

Figure 18 Frequent treatments in public and private hospitals

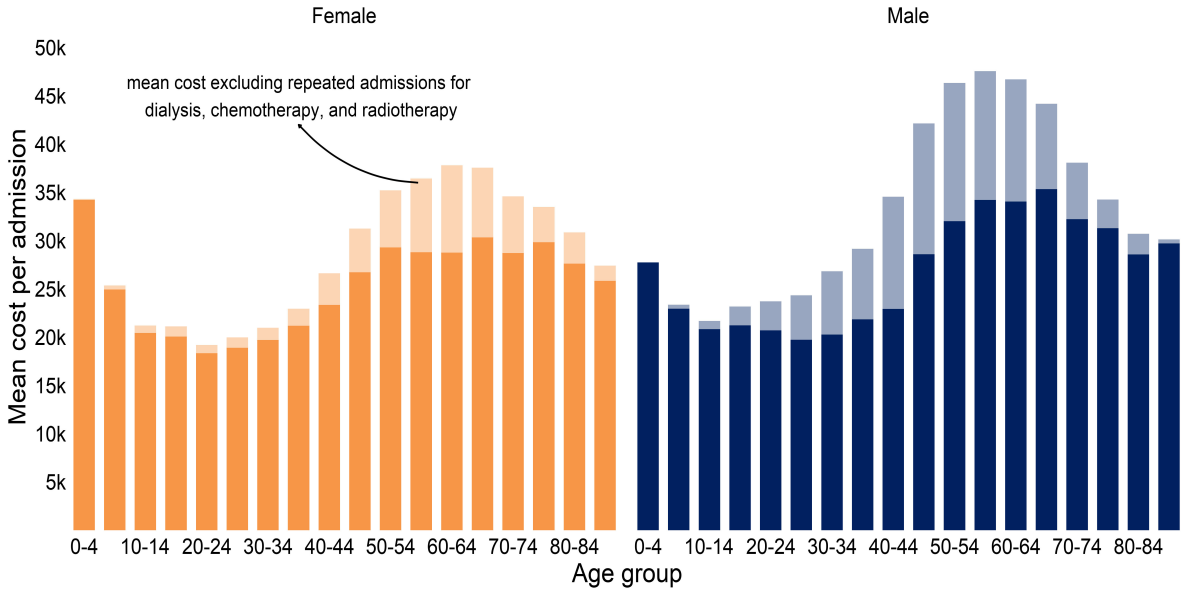


4.5. Costs and Admissions

4.5.1 Mean Cost by Gender and Age Group

The mean admission cost for males was slightly higher (PKR 27,007) than for females (PKR 23,502). It remained roughly the same as in 2021. The mean cost was calculated for each age group and further segregated by gender (Figure 19). The lighter colour in the figure shows the mean cost when repeated admissions were excluded. It can be observed that the mean cost increased for older adults.

Figure 19 Mean cost by gender and age



4.5.2 Mean and Aggregate Costs for the Ten High-expenditure Treatments

Figure 20 shows the aggregate costs, number of admissions and mean costs for ten treatments that incurred the highest aggregate expenditure. The y-axis represents aggregate claims cost (in millions), the x-axis represents admissions (in thousands), whereas mean cost determines the size of the point (bubble). Angioplasty incurred the highest aggregate cost among all treatments in 2022, amounting to around 4,703 million PKR. The next most costly treatments were caesarean delivery and normal delivery, followed by chemotherapy. Caesarean deliveries were fewer in number than normal deliveries but incurred higher expenditure due to greater average cost. Dialysis admissions were the highest in number, however, their aggregate cost was less than that of chemotherapy, tonsillectomy, CABG, and cholecystectomy. Out of ten, four treatments belonged to tertiary care.

Figure 20 Aggregate cost for ten costly treatments

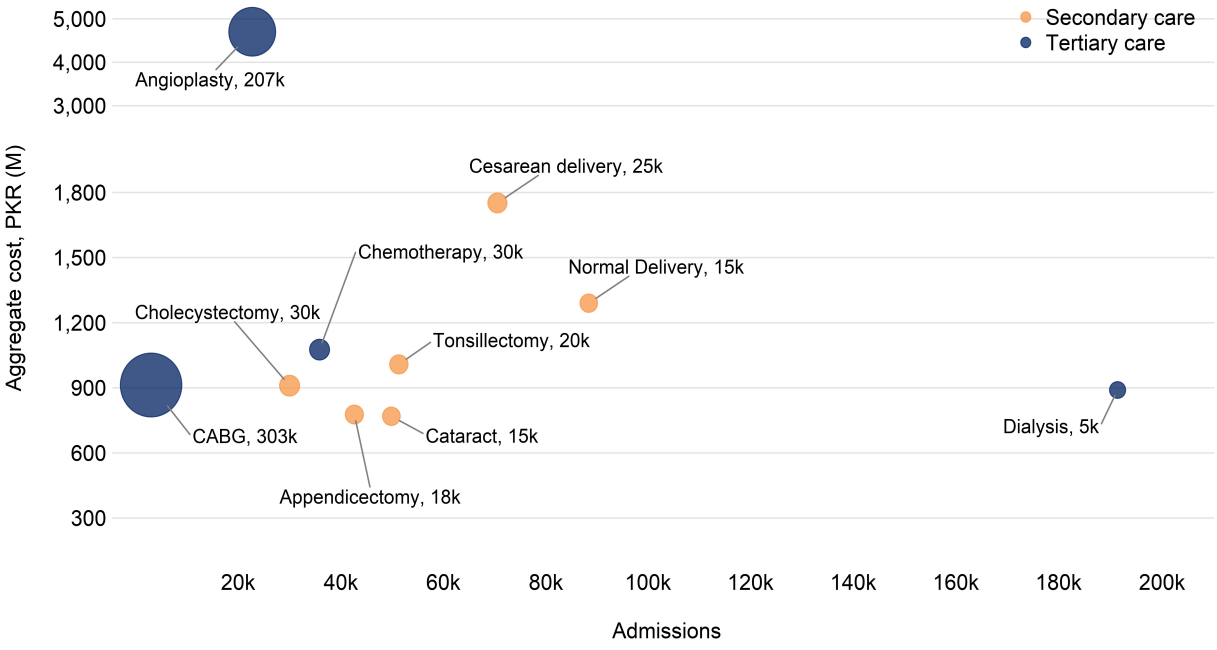


Table 3 provides the year-on-year comparison of ten high-expenditure treatments. The largest increase in admissions and costs was observed for normal deliveries. CABG and Angioplasty exhibited relatively modest increases.

Table 3 Year-on-year comparison of admissions and costs for 10 high-expenditure treatments

	Admissions			Cost (Million PKR)		
Treatment	2021	2022	Change (%)	2021	2022	Change (%)
Angioplasty	14,419	22,711	57.5	3,099	4,704	51.8
Caesarean delivery	31,932	70,472	120.7	672	1,752	160.5
Normal delivery	30,668	88,262	187.8	386	1,290	234.3
Chemotherapy	19,435	35,825	84.3	546	1,076	97.2
Tonsillectomy	26,407	51,270	94.2	447	1,008	125.7
CABG	2,330	3,011	29.2	675	913	35.3
Cholecystectomy	17,309	29,986	73.2	482	910	88.6
Dialysis	93,089	191,272	105.5	386	890	130.4
Appendicectomy	23,892	42,604	78.3	402	777	93.1
Cataract	28,476	49,814	74.9	423	769	81.7

4.5.3 Mean and Aggregate Costs for the Ten Most Utilized Treatments

Figure 21 illustrates the mean costs and aggregate costs for the ten most utilized treatments. The size of each point (bubble) is determined by the aggregate cost (million PKR), provided next to the treatment name. Dialysis admissions were highest and around 191,272, followed by maternity cases (158,734), tonsillectomy (51,270) and cataract (49,814). The highest mean cost among the ten most utilized treatments was for cholecystectomy (PKR 30,340), followed by chemotherapy (PKR 30,000). Out of ten, three treatments belonged to tertiary care.

Figure 21 Mean cost for ten most utilized treatments

Table 4 provides the year-on-year comparison of the ten most utilized treatments.

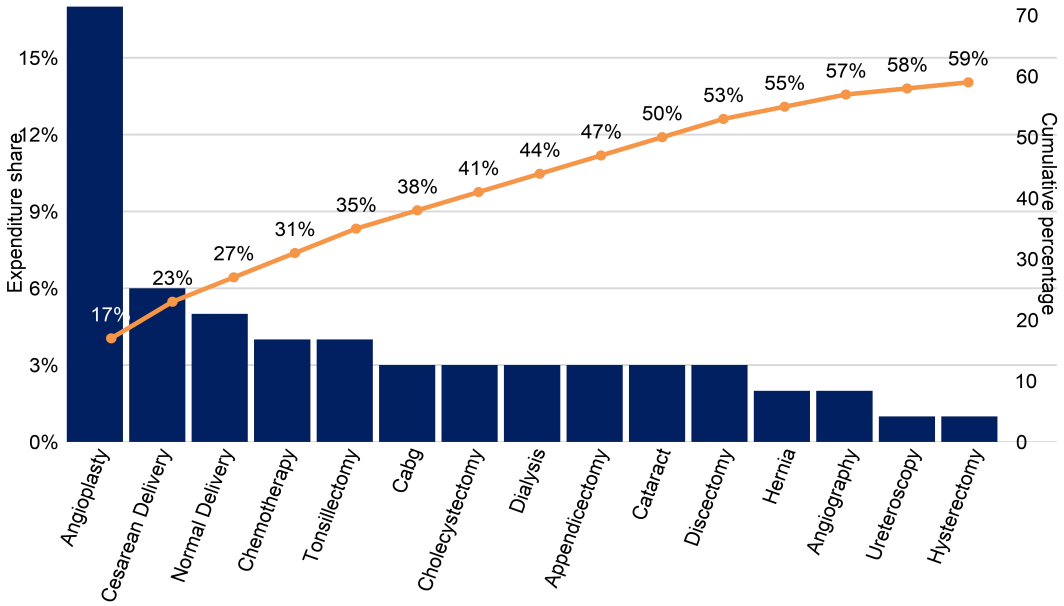
Table 4 Year-on-year comparison of admissions and costs for ten most utilized treatments

	Admissions			Cost (Million PKR)		
Treatment	2021	2022	Change (%)	2021	2022	Change (%)
Dialysis	93,089	191,272	105.5	386	890	130.4
Normal delivery	30,668	88,262	187.8	386	1,290	234.3
Caesarean delivery	31,932	70,472	120.7	672	1,752	160.5
Tonsillectomy	26,407	51,270	94.2	447	1,008	125.7
Cataract	28,476	49,814	74.9	423	769	81.7
Appendicectomy	23,892	42,604	78.3	402	777	93.1
Chemotherapy	19,435	35,825	84.3	546	1,076	97.2
Cholecystectomy	17,309	29,986	73.2	482	910	88.6
Hernia	16,705	28,672	71.6	340	662	94.7
Angiography	19,259	26,852	39.4	428	538	25.5

4.5.4 Cost-share of the Fifteen High-expenditure Treatments

Angioplasty had the largest share (17%) in the aggregate claims cost, followed by maternity cases (10.5%). The top fifteen high-expenditure treatments accounted for 59% of aggregate claims costs, as shown in Figure 22.

Figure 22 Cost-share of the fifteen high-expenditure treatments

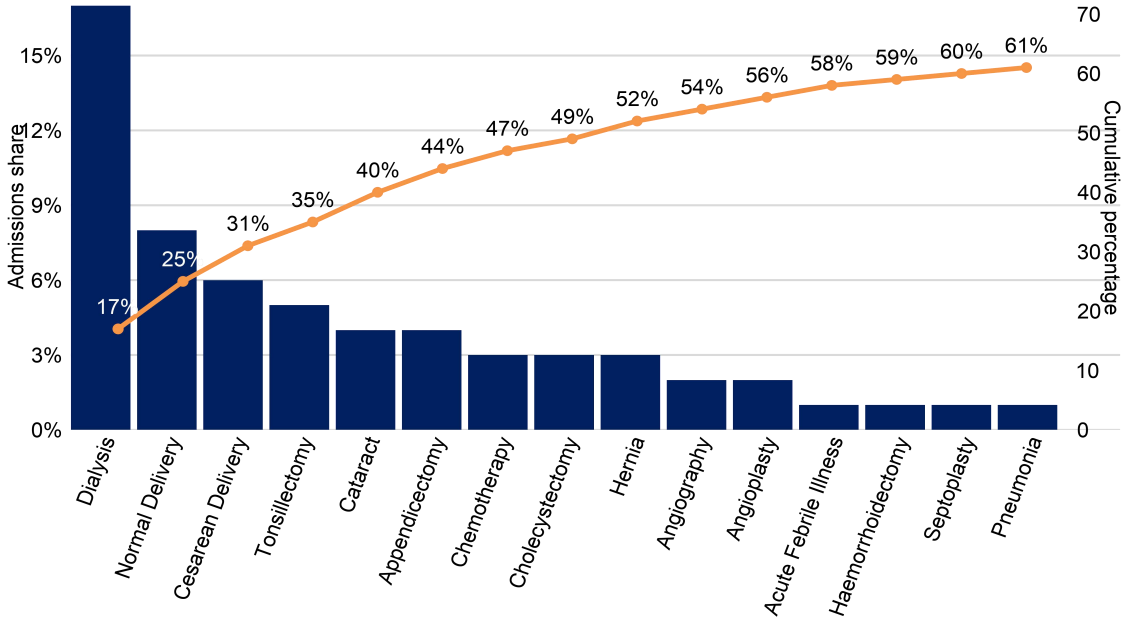


4.5.5 Admissions Share of the Fifteen Most-utilized Treatments

Figure 23 shows the admissions share of each treatment in total admissions for the fifteen most utilized treatments, along with the cumulative sum of the admissions. Dialysis accounted for 17% of total admissions, followed by maternity cases (14%). The top ten treatments collectively constituted 54% of total admissions and with the addition of the next five treatments the cumulative share stood at 61%.

Dialysis, which constituted 17% of the admissions, accounted for 3% of the aggregate cost, whereas angioplasty, which accounted for 17% of the costs, constituted 2% of the admissions.

Figure 23 **Admissions share of the fifteen most-utilized treatments**



4.6. Utilisation and Geographical Considerations

4.6.1 Inter-district Movement

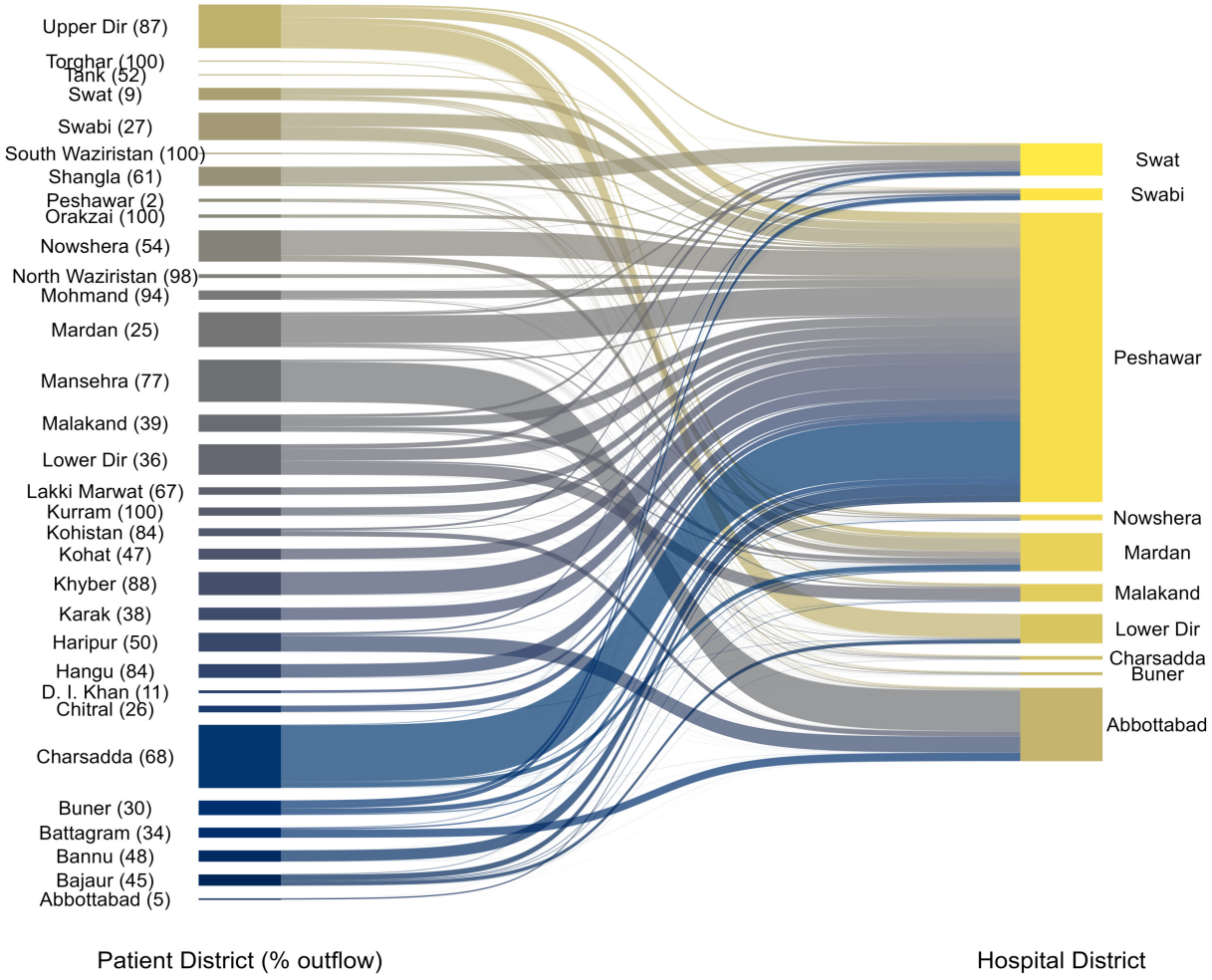
The programme discourages inter-district movement for treatment by placing certain checks. This is done to improve the supply side within the districts. However, the programme allows inter-district movement when treatment is not available in the district for residents or the medical condition is complicated that requires specialized care.

Over the years, new health facilities have been empanelled, including in remote districts such as Lower Dir and Battagram. The new empanelled hospitals have started facilitating the residents and residents of nearby districts and reduced the patient outflow to far districts, such as Peshawar, to a certain extent. However, the patient outflow is still quite significant and for some districts it is even above 80%.

Illustrated in Figure 24, the left side displays the district of the patient origin. On the right side are the top ten districts of receiving patients. The height of the rectangle (box) next to the district name corresponds to the outflow and inflow frequency. It was observed that Peshawar was the largest receiver of patients from outside the districts, followed by Abbottabad, Mardan and Swat. Peshawar received patients from all districts.

In district Swat, eight new hospitals were added to the panel in 2022, resulting in a total of 23 empanelled hospitals. It can be observed that only 9% of the patients from Swat had sought treatment outside Swat. Moreover, it received most of the patients from the adjacent Shangla, which had only five empanelled hospitals. A similar observation can be seen for Lower Dir, which received majority of the patients from Upper Dir.

Figure 24 Inter-district patient movement in 2022

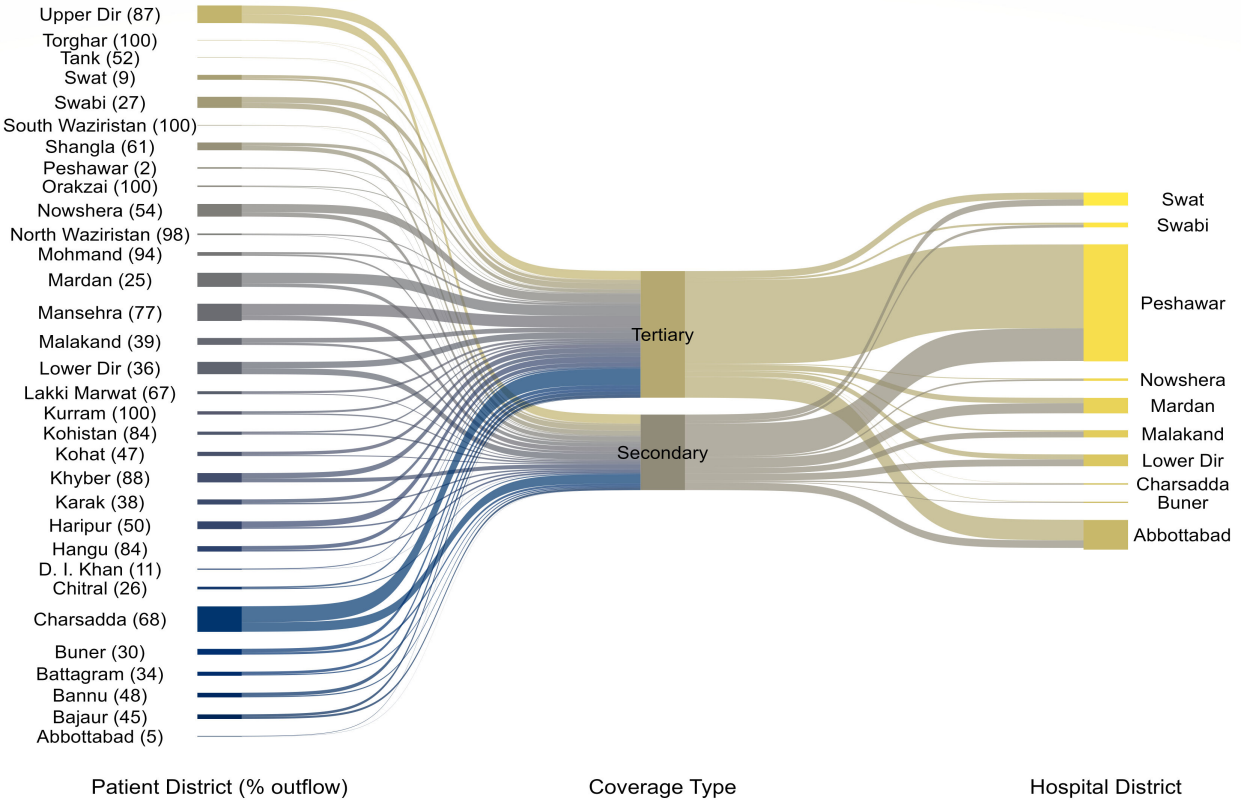


Districts where the need for out-of-district care arose the most were Torghar, South Waziristan, Orakzai, Kurram, North Waziristan and Mohmand, indicating an undersupply of health care services in these areas.

It can also be observed that besides Peshawar, only four districts namely Abbottabad, Swat, Mardan and Lower Dir received somewhat moderate outside-district patients, indicating that Peshawar was still burdened with outside-district patients. However, with the increase of empanelled hospitals across the province, the outflow to Peshawar is anticipated to decrease over time.

Figure 25 further stratifies the inter-district patient mobility by the type of care needed. It shows that Peshawar received a major volume of patients for tertiary care, followed by Abbottabad. This was partly due to the chemotherapy, radiotherapy and dialysis cases. Patient inflow to Peshawar for secondary care was comparatively also higher than in other districts.

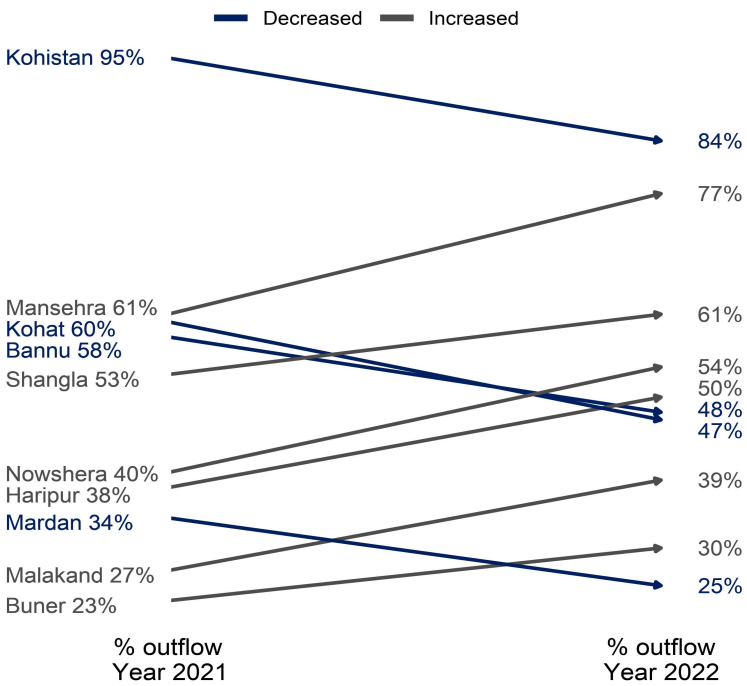
Figure 25 **Inter-district patient flow by type of care**



4.6.2 Changes in Inter-district Patient Movement

Compared to 2021, the percentage of out-of-district treatments varied across districts in 2022, with mixed results. In some districts, the outflow declined, while in others, the opposite occurred. Figure 26 shows the top ten districts with the highest changes (in terms of percent) in outside-district admissions in 2022 compared to 2021. Kohistan, Kohat, Bannu, and Mardan observed a decline from 95% to 84%, 60% to 48%, 58% to 48%, and 34% to 25%, respectively, whereas Nowshera, Haripur, Malakand, and Buner observed an increase in the outflow.

Figure 26 **Top ten districts with major changes in inter-district patient movement (2021-2022)**



Overall, a rise in out-of-district admissions was observed, increasing from 35% in 2021 to 38% in 2022. It is expected that inter-district movement will eventually decline with the emergence of empanelled hospitals within districts. Although new hospitals were added in 2022, their distribution across districts was uneven. Furthermore, the average number of admissions per facility increased by over 60%, indicating a larger growth in admissions compared to health care infrastructure expansion. As a result, improvements in geographical equity were noticeable only in certain districts. It is also worth noting that some residents living outside their districts, especially in Peshawar, might seek care within the district itself instead of travelling to their home districts. This suggests that the actual number of outside-district admissions requiring travel might be slightly lower than the observed values.

The programme needs to closely examine this situation and work towards retaining patients within their districts for treatment, which ultimately requires strengthening of health care infrastructure within the districts.

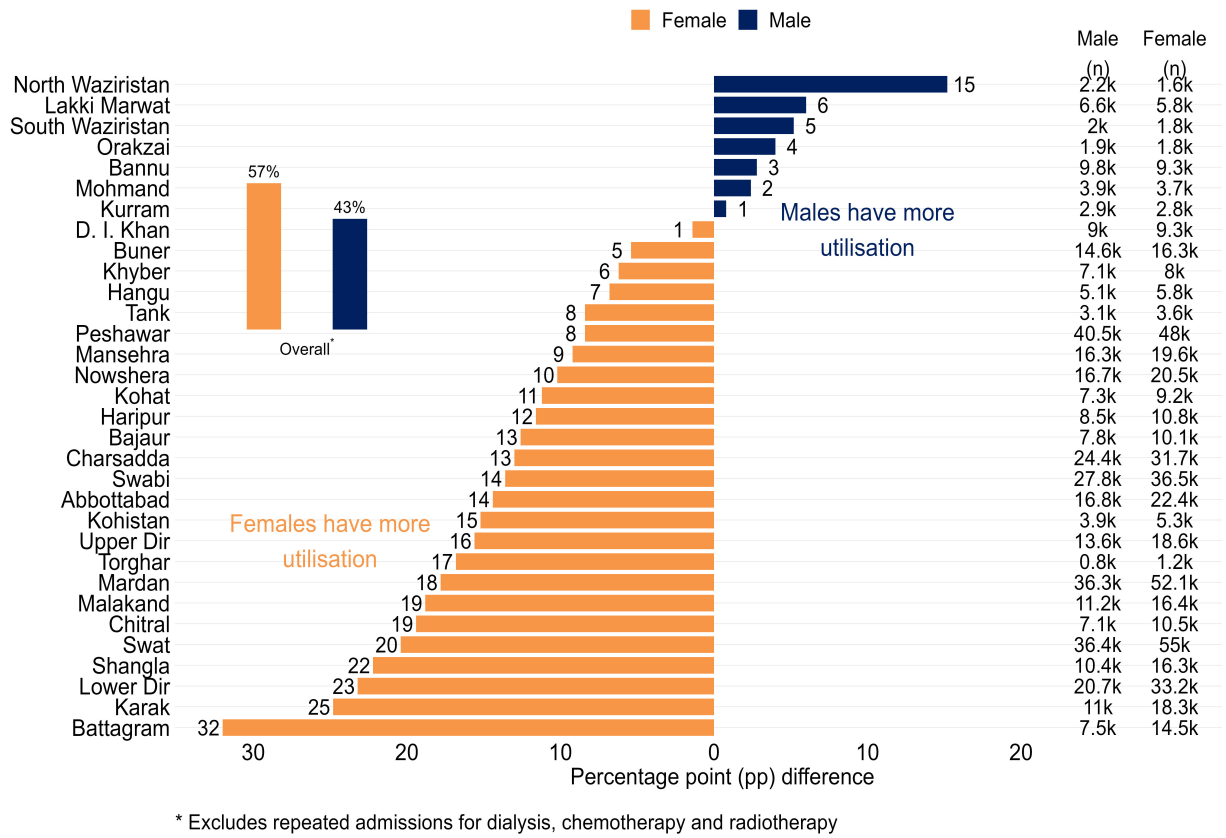
4.6.3 Geographical Differences in Utilization, Startified by Gender

Percentage point differences between male and female admissions were calculated to observe the gender-wise disparity in utilisation across districts. Figure 27 shows the lead of females over males on the left side and the lead of males over females on the right side, with the absolute number of admissions by both genders.

Excluding repeated admissions, females constituted 57% of the total admissions. Seven districts showed higher male utilisation than female utilisation. In the remaining districts, females utilized the services more.

As mentioned previously, maternity cases tend to contribute more to female utilisation. In districts where males had higher utilisation, there was a relatively low proportion of maternity cases. This appeared to influence the positive percentage-point difference between males over females. In Battagram and Karak, normal deliveries constituted the most, respectively 25% and 14% of total admissions, followed by 13% and 9.5% caesarean deliveries. On the other hand, in North Waziristan, caesarean delivery was the 8th most utilized treatment. In Bannu, it was 5th most utilized treatment, whereas normal deliveries were ranked 14th and 13th, respectively. A similar observation was observed for Lakki Marwat. In addition to a potential undersupply of health care services, as few hospitals are on the panel in these areas, this also suggests a possible lack of institutional deliveries, where hospitals are primarily used in complex cases, as indicated by the higher occurrence of caesarean sections compared to normal deliveries.

Figure 27 **Geographical differences in utilisation (male versus female)**



* Excludes repeated admissions for dialysis, chemotherapy and radiotherapy

5. CONCLUSION

This report provides an analysis of the utilisation data for the Sehat Card Plus programme for its second year of universal coverage. It observes the utilisation and cost patterns by gender, hospital ownership, treatments, geography and compares them with the first year of universal coverage (2021).
The number of admissions and costs doubled from the previous year. As the programme evolves by constantly adding new beneficiaries, procedures, and hospitals, utilisation rates and costs will increase. The programme will need to streamline resources and optimize the existing public health care infrastructure accordingly.

The programme effectively catered to older adults of both genders, with relatively higher utilisation rates than the younger age group. However, within the older age group, female utilisation lagged behind males, requiring further exploration of potential determinants of gender differences, including need factors and enabling factors. Moreover, the older age group consumed a larger portion of the pool than the younger one due to the high utilisation rate and high average cost. Majority of the population of KP is young, and as the young population ages over time, a rise in admissions and costs can be expected.

The private sector accounts for more admissions and costs, but the public sector is gradually catching up. The public sector requires infrastructure improvement, particularly for secondary care, to reduce the need for inter-district travel.

The programme provided wider access to vital obstetric and emergency care, positively impacting maternal and child health outcomes, particularly given the high rates of maternal and perinatal mortality in Pakistan. The programme facilitated thousands of life-saving procedures, including cardiac interventions and organ transplants (kidney and liver), contributing to a healthier society.