



Government of Pakistan

**Ministry of National Health Services,
Regulations & Coordination**



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National Vision for Surgical Care

2020-25 



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Acronyms

CME	Continuing Medical Education
CPSP	College of Physicians and Surgeons Pakistan
DHO	District Health Officer
DHQ	District Headquarter
DIP	District Implementation Plan
EPHS	Essential Package of Health Services
HIP	Health Insurance Program
HRH	Human Resource for Health
IHHN	Indus Hospital and Health Network
LCoGS	Lancet Commission on Global Surgery
LMICs	Lower and Middle Income Countries
MoNHSR&C	Ministry of National Health Services Regulations and Coordination
NGO	Non Governmental Organization
NSOAP	National Surgical Obstetric and Anesthesia Plan
NVSC	National Vision for Surgical Care
PGSSC	Program in Global Surgery and Social Change
PMC	Pakistan Medical Commission
PSOAP	Provincial Surgical Obstetric and Anesthesia Plan
SAO	Surgeons, Anesthesiologists and Obstetricians
SDGs	Sustainable Development Goals
THQ	Tehsil Headquarter
TWG	Technical Working Group
UHC	Universal Health Coverage
WHA	World Health Assembly
WHO	World Health Organization

Foreword

The development of National Vision for Surgical Care 2020-25 for Pakistan is an essential step towards addressing the gaps in surgical care within the country. In line with the Sustainable Development Goals 2030 Agenda, NVSC 2020-25 will address the requirements of the World Health Assembly resolution 68.15: “Strengthening emergency and essential surgical care and anesthesia as a component of Universal Health Coverage.”

Globally, one-third of the disease burden is attributable to surgically preventable conditions, of which two-thirds are in low to middle-income countries. In Pakistan, a low-middle income country, almost a quarter of the disease burden is attributable to surgical causes which translates to approximately 17 million surgical procedures required annually.

The need of the hour is to develop a framework for optimizing surgical care delivery within the country which provides a set of guidelines in the domains of workforce, infrastructure, service delivery, information management and finance. The NVSC 2020-25 fulfills this purpose entirely. It provides provincial perspectives, specialty focus, monitoring framework, and a governance framework to streamline surgical care delivery across the country.

The timing for introducing NVSC 2020-25 is most opportune. The Government of Pakistan has recently introduced the ‘Essential Package of Health Services’ to be implemented across all five service delivery platforms, which includes community, primary, secondary, tertiary and population levels. The EPHS follows the UHC approach and addresses causes of disease, mortality and morbidity through provision of preventive, promotive, curative and rehabilitative services. The surgical interventions required have been identified, costed and mapped for delivery at the respective health facility levels to comprehensively address the UHC surgical care indicators.

The key to achieving health-related SDGs lies in the implementation of UHC across the five healthcare delivery levels and NVSC 2020-25 provides the framework to pursue this agenda.

I greatly appreciate the key contributions of the Indus Hospital & Health Network, the Program for Global Surgery and Social Change, and the World Health Organization, led by Dr. Abdul Bari Khan, Dr. John Meara, and Dr. Walt Johnson respectively, towards this initiative.

— **Dr. Faisal Sultan**, *Special Assistant to the Prime Minister/ Minister of Health*

Acknowledgments

National Vision for Surgical Care 2020-25 is the culmination of a lengthy deliberative process that commenced with the stakeholders' conference on developing a National Vision for Surgical Care for the country in November 2018. NVSC 2020-25 is part of Pakistan's continuing efforts in introducing health systems reforms essential to meeting its international commitment of achieving Sustainable Development Goals 2030 Agenda, especially in terms of "ensuring healthy lives and promoting well-being for all at all ages".

The Ministry of National Health Services, Regulations and Coordination is continuously striving to significantly improve and sustain access to an affordable package of life-saving health interventions that include surgical interventions at respective service delivery levels.

MoNHSR&C recognizes the contributions of all provincial/area - departments of health during the development of NVSC 2020-25. It was essential to include provincial/area inputs in this document as the implementation of the interventions would be taking place in their respective domains.

The efforts of Indus Hospital & Health Network are to be lauded. IHHN has continuously supported all governmental efforts at improving service delivery at the primary healthcare level. It is heartening to note that IHHN is also taking forward the same vigor and drive towards the improvement of service delivery in the surgical domain.

The formulation of the NVSC 2020-25 would not have been possible without the technical guidance provided by international experts and combined efforts of the Ministry of Health, especially Dr. Malik Muhammad Safi, Dr. Raza Zaidi and his team, and Dr. Lubna Samad and her team from the Indus Hospital & Health Network. The MoNHSR&C is cognizant of the importance of this support.

NVSC 2020-25 will fill an important gap towards pursuing the Government of Pakistan's health reform agenda and assist with implementing Universal Health Coverage for all citizens of Pakistan.

— **Dr. Rana Muhammad Safdar**, Director General Health

National Health Vision – Pakistan



To improve the health of all Pakistanis, particularly women and children, by providing universal access to affordable, quality, essential health services, which are delivered through a resilient and responsive health system, capable of attaining the Sustainable Development Goals and fulfilling its other global health responsibilities.

Introduction

Surgically treatable conditions constitute one-third of the global burden of disease and are responsible for over 18 million preventable deaths each year. Approximately five billion people worldwide do not have access to safe, timely, and affordable surgical, obstetric, and anesthesia care. In Pakistan, surgical diseases are responsible for 187 deaths per 100,000 population per year, compared to 164 per 100,000 for all infectious diseases combined. The high morbidity and mortality rates from surgical conditions in Pakistan are due to a deficit of 17 million surgical procedures per year.

To acknowledge and help resolve this global health challenge of inequitable access to surgical care, the World Health Assembly passed Resolution WHA 68.15 in May 2015. All member states, including Pakistan, committed to the vision that emergency and essential surgery, including anesthesia and obstetrical services, are an integral component of universal health coverage, and their progress would be reported biennially to the World Health Organization.

In line with Pakistan's commitment to WHA Resolution 68.15 to strengthen surgical systems and to strive towards universal availability of safe essential surgical care, the Ministry of National Health Services, Regulations and Coordination and the Indus Hospital & Health Network, in collaboration with WHO and Harvard Medical School's Program in Global Surgery and Social Change, launched an initiative to develop National Vision for Surgical Care 2020-25 for Pakistan as a component to the recently launched National Health Vision 2025.

This initiative was launched at the first National Stakeholders' Conference in Islamabad in November 2018. The participants included representatives from the federal health ministry and provincial health departments, surgeons, obstetricians and anesthetists from private and public health sectors across Pakistan, as well as policymakers, representatives from professional societies and academia, international stakeholders and multilateral donors.

A Consensus Statement was agreed upon at the end of the conference and was circulated to all the participants in February 2019, after approval from Secretary Health at MoNHSR&C. A key commitment in the Consensus Statement was to draft a "National Vision for Surgical Care 2020-25" document that outlines a unified national approach to surgical systems strengthening across Pakistan and guides provincial plans for

implementation of this vision.

An outline of this document was shared with the provincial stakeholders in March 2019 followed by individual provincial consultations conducted in Sindh, Punjab, Khyber Pakhtunkhwa, and Balochistan. During these consultative meetings, the draft document was reviewed and discussed in detail, and the feedback was subsequently incorporated.

The NVSC 2020-25 document highlights the gaps and challenges faced by the provinces in the delivery of safe surgical care and outlines strategies to address those gaps. The document serves as an addendum to the National Health Vision 2025 and further promotes the vision. NVSC 2020-25 outlines the unified national vision to improve healthcare with provincial autonomy, and creates a roadmap for Pakistan to uphold its vision for health as a signatory to WHA Resolution 68.15.

***Surgical care** is an overarching term used to denote care for adults and children delivered by anesthesiologists, obstetricians, gynecologists as well as surgeons from various backgrounds including adult and pediatric general surgery, orthopedics, neurosurgery, urology, eye, ENT, and vascular surgery, as well as ancillary specialties such as nursing and bio-technology. SAO, where used, encompasses all the above specialists.*

Vision

All Pakistani citizens have access to safe, timely, and affordable emergency and essential surgical, obstetric, and anesthesia care services so that they may live healthy and productive lives.

Mission

To improve the health of all Pakistanis through collaboration of the federal and provincial governments, private sector and public-private partnerships by providing universal access to safe, timely and affordable surgical, obstetric and anesthesia services, delivered through a resilient and responsive health system.

Background

I. Surgical care: A critical need in Pakistan

Five billion people worldwide lack access to safe surgical, anesthesia, and obstetric care which results in over 18 million preventable deaths each year. It is estimated that one-third (28-32%) of the global burden of disease could be attributed to surgically-treatable conditions, ranging from road traffic accidents, non-communicable diseases, and congenital malformations to obstetric complications. Of the 313 million surgical procedures performed each year worldwide, only 6% are for the poorest third of the population, compared to 74% for the wealthiest third. To bridge this gap and address the global burden of surgical diseases, an additional 143 million procedures are needed each year.

In addition to causing high morbidity and mortality rates, lack of access to surgical care also imposes a significant economic burden on nations. Surgery not only saves lives and prevents disability, but also promotes economic growth. Without adequate investments in surgical systems, low-and-middle-income countries are projected to lose \$12.3 trillion in projected economic growth by 2030. In comparison, it is estimated that global investments of \$350 billion in LMIC surgical systems could help address the burden of surgical diseases.

A majority of the 207.8 million Pakistanis lack access to surgical care; it is estimated that an additional 10 million surgical procedures are needed to address the burden of surgical diseases across the country. In 2015, the Lancet Commission on Global Surgery recommended a minimum of 20 surgeons, anesthesiologists and obstetricians per 100,000 people whereas in Pakistan there are only an estimated 6 per 100,000.

II. Framework to optimize surgical care delivery

In 2015, the Lancet Commission on Global Surgery launched its report on “Global Surgery 2030” and proposed a list of six indicators along with the National Surgical, Obstetric and Anesthesia Plan approach as a guide to help committed countries frame their surgical care strategies.

NSOAPs are strategic plans to help strengthen a country's surgical service delivery system across six strategic priorities or domains:

1. Governance
2. Health Financing
3. Service Delivery
4. Infrastructure
5. Health Workforce
6. Health Information System

NVSC 2020-25 adopts the NSOAP approach to determine the strategic priorities for promoting efficient and reliable surgical care in Pakistan. A coordinated, comprehensive and tailored approach using this framework is required to meet the country's need for optimizing surgical care delivery. The framework suggested is shown below in Figure 1:



Figure 1: Framework process to develop the NSOAP through a consultative process

Pakistan has a devolved healthcare system so this tailored approach will be used individually by each province according to their situation and context; however, the surgical indicators will be standardized to ensure uniform reporting.

Pakistan’s National Vision for Surgical Care 2020-25

The development of a guiding framework in the form of NVSC 2020-25 is an essential step towards achieving United Nations’ SDG-3 and Universal Health Coverage in Pakistan. Furthermore, these steps are in accordance with the World Health Assembly resolution WHA 68.15. NVSC 2020-25 compliments the National Health Vision 2025 with high-level strategies to improve access to quality surgical, obstetric, and anesthesia care, through high-level indicators and time-bound targets for strengthening surgical systems.

NVSC 2020-25 adopts the NSOAP approach that will be strategically aligned with the National Health Vision 2025 and health priorities set forth by the Government of Pakistan. The aim is to ensure efficient healthcare delivery and strengthening of health systems. The NVSC 2020-25 is driven and owned by MoNHSR&C throughout the process of development, national and provincial consultations and formulation.



Strategic Priority Areas of NSOAP Framework

The NSOAP framework defines six interrelated priority areas or domains to strengthen the surgical and health system in a comprehensive and multidisciplinary manner, as follows: 1) Governance; 2) Health Financing; 3) Service Delivery; 4) Infrastructure; 5) Health Workforce, and 6) Health Information System. These are described in relevance to the Pakistani context as follows:

I. Governance

To efficiently and effectively implement NVSC 2020-25 and Provincial Surgical Obstetric and Anesthesia Plan, a clear accountability chain across the entire health system is required. Key to this is the coordination of individual and diverse stakeholders, necessitating effective governance at each level.

A. National Level

MoNHSR&C

The NVSC 2020-25 process is led by the MoNHSR&C. At the federal level, the NVSC 2020-25 document complements the National Health Vision 2025. It is the responsibility of the federal government to strengthen surgical care in Pakistan in line with priorities set in the National Health Vision.

NVSC Steering Committee

NVSC 2020-25 implementation is overseen by the Steering Committee, as notified by MoNHSR&C, consisting of members of MoNHSR&C, professional societies, provincial steering committees, implementation partners, and civil society. The Steering Committee is responsible for supervising, monitoring, and evaluating activities, as well as collecting and integrating feedback to improve the implementation process on a regular basis.

NVSC Technical Working Group

The Technical Working Group is responsible for the technical work and drafting of the NVSC 2020-25 document and other relevant material as well as coordinating logistics of the national and provincial stakeholder meetings. The TWG provides technical support and expertise during the NSOAP development and implementation processes at district and tehsil levels.

B. Provincial Level

Provincial Department of Health

The PSOAP process is led by the provincial departments of health as an adaptation and application of NVSC 2020-25 that is tailored to local, province-specific needs. The provincial health departments remain in close coordination with the federal MoNHSR&C and the TWG to ensure alignment with the priorities of NVSC 2020-25.

PSOAP Steering Committee

Each province will develop and implement its locally-adapted PSOAP. PSOAP implementation is overseen by the Provincial Steering Committee, consisting of members of the provincial health department, professional societies, implementation partners, and civil society along with members of the TWG. The Steering Committee is responsible for supervising, monitoring, and evaluating PSOAP activities, collecting and integrating feedback, and reporting to the NVSC 2020-25 Steering Committee. Additionally, once funding is allocated, the PSOAP Steering Committee is responsible for prioritizing and defining PSOAP activities according to local needs and available funds.

C. District Level

At the district level, each District Health Officer will nominate a PSOAP representative to communicate the District Implementation Plan down to the facility level and coordinate facility-based PSOAP activities. These include, but are not limited to, the training of health personnel on PSOAP content, collecting PSOAP implementation data at facility level, and reporting to provincial representatives. Districts are expected to report to provinces monthly.

D. Facility Level

Facilities, in turn, are responsible for implementing PSOAP activities at the facility level by ensuring the mobilization of resources according to the PSOAP agenda and the inclusion of PSOAP in the facility's health plan. Facilities are expected to provide implementation progress reports to the district level monthly. The Medical Superintendent of the District Headquarter Hospital and Tehsil Headquarter Hospital will be responsible for overseeing PSOAP implementation and reporting to higher levels.

E. Special Entities

Regulatory and Certification Bodies, Professional Societies, and Academic Institutions

Pakistan Medical Commission (formally known as Pakistan Medical and Dental Council) is the main regulatory body with a mission to safeguard the uniform minimum standards of basic and higher qualifications in Medicine and Dentistry. The regulatory body along with the certification bodies (College of Physicians and Surgeons Pakistan, Pakistan Nursing Council), professional societies and academic institutions are responsible for developing evidence-based guidelines for curricular development to train SAO professionals. They are also expected to advocate for NVSC 2020-25 and PSOAPs, provide guidance during implementation and provide continuing professional education to the trainees.

Non-Governmental Organizations

NGOs are responsible for aligning their activities with priorities set forth by the NVSC 2020-25 and PSOAPs. They are expected to coordinate with the NVSC 2020-25 and PSOAPs Steering Committees to prevent duplication of efforts and ensure optimal use of resources.

II. Health Financing

To effectively implement PSOAPs, integrating plans within existing provincial health planning processes allows for adequate allocation of funds. Funds for implementation will be earmarked accordingly and donors will be mobilized in liaison with MoNHSR&C. Increased governmental and developmental support is expected to decrease catastrophic and impoverishing expenditure to surgical care at an individual level.

III. Service Delivery

Challenges: Minimum service delivery standards at a secondary level have been defined but have not been implemented across the board. The minimum standards for surgical care delivery need to be outlined for all tiers of the health system. Service delivery is dependent on all the other domains like availability of required infrastructure, and appropriate SAO workforce. Addressing the issues under the other domains will allow seamless surgical service delivery across different levels of healthcare.

Action: Optimal delivery of SAO services requires strengthening of the national and provincial SAO referral systems and an equitable distribution of SAO services throughout the country. All facilities providing SAO care are required to improve perioperative care and ensure safe critical care services at the hospital level.

Essential Package of Health Services

The Government of Pakistan, with the agreement of provincial/area departments of health has approved a set of surgical interventions at primary, secondary, and tertiary healthcare levels, in line with recommendations of the Disease Control Priorities - 3 to achieve SDG 2030 targets. These recommendations have been costed and are to be implemented across the health facility levels.

Specialty Focus

Surgical care is a cross-cutting intervention addressing a wide range of conditions. Adequate maternal and neonatal healthcare relies upon the availability of safe emergency obstetric and newborn care, including the availability of cesarean sections and surgical treatment for pregnancy complications such as postpartum hemorrhage. Children's surgeries, most notably neonatal interventions, have a profound impact on the socio-economic growth of countries. Surgery is required to address congenital malformations (e.g. clubfoot, congenital heart defects) and complications of infectious diseases (e.g. rheumatic heart disease, tuberculosis).

Additionally, the burden of traumatic injuries (e.g. road traffic accidents, violence, natural disasters) is significant worldwide, with an important consideration for missed neurological and spinal trauma (e.g. traumatic brain injury).

With epidemiological evolution, LMICs, including Pakistan, transition from a high burden of infectious diseases to a concurring burden of communicable and non-communicable diseases. The latter encompasses an important need for surgical care, including, but not limited to, cardiovascular diseases, malignancies, diabetic complications, respiratory diseases and renal disease. Over 80% of cancer cases require surgical treatment over the course of their progression for curative or palliative reasons.

IV. Infrastructure

Challenges: The existing infrastructure and current workload on the surgical health system are a real challenge in the way of delivery of optimal surgical care. The equipment and facilities required at each tier of the health sector are non-compliant with the minimum standards. The process of renovation and replacement of surgical infrastructure has to undergo a tedious process of requests and approvals which leads to unnecessary delays.

Actions: Existing facilities need to be strengthened to be able to provide safe SAO care as deemed appropriate for their level in the health system. To do so, adequate allied and ancillary services (e.g. laboratory, imaging, and rehabilitation services) and utilities (e.g. oxygen, water, and electricity) will be scaled at all facilities providing SAO care.

This will be enabled by the establishment of a robust surgical supply chain with the availability of the necessary disposables, consumables, blood, and blood products to enable SAO to deliver services optimally.

V. Health Workforce

Challenges: The SAO workforce includes surgeons (all specialties of adult and children's surgery), anesthetists and obstetricians as well as the ancillary staff. The SAO workforce density is 6 per 100,000 people and the nurse-to-physician ratio is 1:2; both do not comply with international standards.

There are different levels of healthcare services in Pakistan (primary, secondary and tertiary) and the trained workforce required to deliver these services varies accordingly. These requirements have been listed in the Minimum Standards of Service Delivery but compliance to the standards set forth is not observed.

Actions: Strengthening the SAO workforce in Pakistan requires a multi-pronged approach through which an increased number of SAO specialists and allied health staff (e.g. nurses, technicians) will be trained and provided with employment opportunities relative to needs across the country.

Additionally, active engagement of professional societies is an anticipated critical component, to not only provide Continuing Medical Education to upskill the SAO workforce, but also to provide alternative models of healthcare provider training in order to meet both short-term and long-term needs. Similarly, the role of allied health professionals in the delivery of SAO care will be defined with adequate and appropriate training and quality assurance of these providers. Strategies will focus on retaining trained workforce and incentivizing rural and semi-urban job postings.

VI. Health Information Systems

Challenges: The information management is not synchronized across all levels of healthcare. All primary and secondary levels of health facilities report to the district health information system. This system does not encompass the surgical indicators listed internationally. Since there is no electronic referral system, there is an overwhelming load at the tertiary level of care. Tertiary level hospitals and all private healthcare facilities are neither linked nor reporting to a national information management system.

Action: Systematic collection, transparent reporting, and utilization of SAO indicators will allow monitoring and evaluation of the impact of implementation of NVSC 2020-25 and individual PSOAPs. By strengthening the health management information system, standardizing electronic medical records to capture SAO data, and building research capacity around SAO systems, gaps and action points in the delivery of care will be highlighted and addressed in a timely manner.

Integration of surgical indicators in our current health system reporting is imperative for matching and competing with international standards. This integration might require redefining and contextualizing some international indicators set forth by the World Bank and the Lancet Commission according to our needs. The recently concluded survey to measure the Lancet Indicators in Pakistan can be used as a baseline to tailor the surgical indicators.

Provincial Perspectives

During the Stakeholders' Meeting in Islamabad in November 2018, stakeholders from all provinces shared their perspectives during discussion sessions focused on individual domains. These discussion points were incorporated in the initial draft of the NVSC 2020-25 document. During the provincial engagement sessions held in each provincial capital in March 2019, broader provincial representation was sought. This allowed for an in-depth discussion specific to the situation in each province with relevant strategies to address the identified gaps.



I. Balochistan

Balochistan, Pakistan's largest province by area, is home to 13.5 million people. There is an ongoing challenge to the delivery of healthcare services in Balochistan.

Workforce: The severe workforce shortages are compounded by a significant urban-rural workforce disparity. Moreover, there is a lack of regulation of job allocations, leading to frequent workforce transfers between facilities. Continuing medical education and systematic capacity-building is absent and there is a genuine need to review the formalized training program for allied health professionals.

Infrastructure: In addition to low numbers of surgical facilities, existing facilities lack functional equipment and durable medical goods needed to ensure continuous use of operating theatres.

Service Delivery: A large proportion of normal deliveries occur at home due to the high costs of obstetric and gynecological care at public and private facilities. Additionally, long distances and poor transportation infrastructure pose barriers to timely access to facilities and further confounds complicated cases. The need for improved training of community midwives and well-regulated referral systems between all levels of care was highlighted. Road traffic accidents contribute significantly to the surgical workload, as do cancers and pediatric surgical conditions.

Information Management: Inadequate reporting systems hinder data collection; therefore, authentic baseline information and subsequent monitoring and evaluation of interventions is not possible. The unregulated private sector caters to a large proportion of the population but it does not report its data to the government.



Quetta, March 14, 2019

II. Khyber Pakhtunkhwa

Khyber Pakhtunkhwa is Pakistan's northernmost province with a population of 33 million.

Service Delivery: The province suffers from a lack of ambulance services, pre-hospital systems, and critical care units to address the high burden of trauma. Similarly, the high burden of maternal mortality and morbidity is under-reported and under-addressed.

Information Management: Although basic information management systems are in place for the public sector, lack of complete and accurate data collection is observed and then reported back to the provincial and national level. No standard reporting mechanism exists for data from the private sector.

Governance: The provincial stakeholders have highlighted the need for increased accountability and regulatory systems to ensure proper monitoring and evaluation of surgical care.



III. Punjab

Punjab, with 116 million people, is the most populated province of Pakistan and the second largest by area after Balochistan.

Workforce: The province of Punjab generates high numbers of trained specialists but retention is a big challenge, with large numbers leaving the country for better employment opportunities abroad. The province actively seeks to provide adequate training and regulation of allied health professionals to address the workforce gap as well as to provide incentives for health professionals to practice in rural regions. Moreover, it calls for the need to specify specialist job spots prior to increasing surgical residency positions, in order to prevent unemployment of graduates despite a high population disease burden.

Information Management: The Health Information Management System is focused on data from district and tehsil hospitals, but tertiary hospitals and the large private sector do not report into the system.

Governance: The newly-formed Health Care Commission regulates the public and private sector.



IV. Sindh

Sindh is the southernmost province of Pakistan with a population of 51 million.

Workforce: The province mainly reports workforce issues, calling for increased training positions for specialist training, regulation and accreditation of allied health workforce, and promoting flexible programs for female health providers to ensure higher retention rates. Additionally, large gaps existing between urban and rural areas call for rural specialist rotations and adequate training programs for rural non-physician surgical providers. In a hub-and-spoke fashion, the province highlighted the need for a devolved but regionalized surgical care model with adequate infrastructural and transport capacity to promote physicians' well-being and safety, in addition to community-level education and awareness to ensure early disease identification and timely referrals.

Information Management: The lack of accurate data being reported into a centralized information management system impedes monitoring and evaluation.



Monitoring and Evaluation Framework

For monitoring and evaluation of NVSC 2020-25 and PSOAPs implementation, a structured framework is required, applicable across all facility levels throughout the country. The six surgical indicators proposed by the Lancet Commission on Global Surgery, four of which are integrated in the World Bank's World Development Indicators, allow for comprehensive monitoring and evaluation of interventions. These indicators are expected to provide the backbone of a comprehensive monitoring and evaluation framework and have been modified according to the country context and will be reported by the Ministry of National Health Services, Regulations and Coordination as below:

Indicator Definition	Baseline	Target 2025	Data Source	Collection Department	Frequency
<p>Indicator 1: Availability of surgical services at the first level hospital</p> <p>This indicator will assess the availability of surgical services according to the Essential Package of Health Services under the Universal Health Coverage at the Tehsil Head Quarter Hospital and District Head Quarter Hospital in all the districts across Pakistan</p>	Percentage of Tehsil and District Head Quarter Hospitals performing the surgical procedures according to Essential Packages of Health Services	25% increase in Tehsil and District Head Quarter facilities performing the surgical procedures according to Essential Packages of Health Services	Monthly reports from Health Management Information System of all Tehsil and District Head Quarter Hospitals	National Health Management Information System	Annually
<p>Indicator 2: Surgical specialist workforce density</p> <p>This indicator measures the number of registered Human Resource for Health Surgeons, Anesthesiologists, and Obstetricians per 100,000 population working to provide emergency and essential care</p>	Number of Surgeons, Anesthesiologists, and Obstetricians per 100,000 population	25% increase in the number of Surgeons, Anesthesiologists, and Obstetricians per 100,000 population	Registered Human Resource for Health with Pakistan Medical Commission according to the different cadre	Pakistan Medical Commission	Every 3 years
<p>Indicator 3: Surgical volume at the District Headquarter Hospital</p> <p>This indicator measures the number of emergency and essential surgical procedures performed per 100,000 population at the District Head Quarter Hospital according to Essential Packages of Health Services</p>	Number of procedures at District Head Quarter Hospitals per 100,000 population	25% increase in surgical procedures at District Head Quarter Hospitals per 100,000 population	Monthly reports from Health Management Information System of all District Head Quarter Hospitals	National Health Management Information System	Annually
<p>Indicator 4: Perioperative mortality rate</p> <p>This includes all-cause mortality before discharge of patients who received surgical care. It allows monitoring and evaluation of the quality of Surgeons, Anesthesiologists, and Obstetricians care compared to national and international perioperative mortality rate benchmarks</p>	Number of deaths after surgical procedures	Perioperative mortality rate of less than 1%	Monthly reports from Health Management Information System of all District Head Quarter Hospitals	National Health Management Information System	Annually
<p>Indicator 5: Number of surgeries sponsored by Health Insurance Program</p> <p>This Indicator assesses the number of surgeries sponsored by the Health Insurance Program with no out-of-pocket expenses incurred by the patient. It thus assesses the catastrophic and impoverishing expenditure due to surgery</p>	Number of surgeries sponsored by Health Insurance Program	20% increase in number of surgeries sponsored by Health Insurance Program	Reports from Health Insurance Program	Health Insurance Program	Annually

Any additional indicators to be added according to the recommendations of the multidisciplinary NVSC 2020-25 Steering Committee.

