



Government of Zimbabwe



National Surgical Obstetric and Anaesthesia Strategy (NSOAS)

Equitable Access & Quality

Ministry of Health and Child Care

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Foreword



The Health Sector in Zimbabwe is guided by the National Health Strategy (NHS) 2021-2025 which feeds into the Health and Wellbeing Thematic area in the National Development Strategy (NDS) 1. The vision of the NHS 2021-2025 is to have “The highest possible level of health and quality of life for all citizens and permanent residents of Zimbabwe by 2030”. In recent years, developing countries, Zimbabwe included have been facing a dual epidemic of both communicable and non-communicable diseases. The previous NHS 2016-2020 had a strong focus towards public health and in particular communicable disease. As a result, tremendous progress has been made towards controlling communicable diseases. Whilst investments towards sustaining the gains made in controlling communicable diseases, more investments are also required to tackle the emerging challenge of NCDs.

To that effect the current NHS 2021-2025 has ensured that both communicable and non-communicable diseases receive the necessary attention. Implementation of the NHS 2021-2025 will be supported by various program specific strategic documents such as this National Surgical Obstetric and Anaesthesia Plan (NSOAP) to realize the intended goals and objectives. This strategic document is also coming in at an opportune time when the Ministry of Health and Child Care has undergone a restructuring exercise to enhance efficiency in the health sector. Specifically, this NSOAP is coming in to address the burden of disease amenable to surgical care. The unprecedented COVID-19 pandemic in Zimbabwe and globally, has shown the need for building resilient health systems that are well equipped to respond to emergencies but also sustaining essential health services. Continuity of essential health services include provision of surgical, obstetric and anaesthesia care at all levels noting the complexity of the services offered as patients navigate through the higher levels of care in the Zimbabwean health system. Adoption of the resolution WHA 68.15 at the World Health Assembly in 2015 declared emergency and essential surgical and anaesthesia care as essential and indispensable components of UHC.

My Ministry responsible for Health and Child Care has no intention of leaving anyone behind including patients affected by health conditions amenable to surgical care, as Zimbabwe progresses towards attaining the SDG3 targets by 2030 and the ultimate vision of achieving Universal Health Coverage. I would therefore urge our health development partners and relevant stakeholders including the private sector to rally behind and complement the Government of Zimbabwe efforts in addressing morbidity and mortality amenable to surgical care as guided by this NSOAP.

HON. Retired General (Dr) C. G. D. N. Chiwenga 'GCZM'
VICE PRESIDENT AND MINISTER OF HEALTH AND CHILD CARE

Acknowledgements



For the first time in the history of the Health Sector the Ministry of Health and Child Care has successfully put together this National Surgical Obstetric and Anaesthesia Plan (NSOAP). The success of putting together this strategic document was a result of the coordination efforts of the various stakeholders in the health sector.

The journey of developing this document started in the pre-pandemic period of the COVID-19 spearheaded by specialist anaesthetists who persisted to see this cause becoming successful. Let me therefore first and foremost acknowledge the selfless commitment by these NSOAP champions in an effort to ensure that surgical, obstetric and anaesthesia care is given the priority it deserves in our health system.

Appreciation is rendered to the MoHCC directorates and the subnational levels who came together throughout the development process to ensure this document became a reality. Specifically, let me mention the Directorate of Policy Planning for leading the whole process working with a technical core team from the beginning to the end.

The Ministry would also like to acknowledge the contribution from the technical members of various agencies and our health development partners including the private sector and professional associations for their dedication and technical expertise throughout the whole process.

Air Commodore (Dr) Jasper Chimedza
SECRETARY FOR HEALTH AND CHILD CARE

Executive Summary

The provision of health services in Zimbabwe is guided by the National Health Strategy (NHS) 2021-2025 which feeds into the National Development Strategy (NDS) 2021-2025. The aim is to contribute to the country's attainment of SDG3 targets on Health and Wellbeing by 2030. Eleven key priority outcomes have been outlined in the NDS 2021-2025 and NHS 2021-2025. These key national strategic documents have noted that Zimbabwe faces a double burden of both communicable and non-communicable diseases with NCDs being fifth of the top 10 leading causes of death in the country in 2019, according to WHO. Several of these have surgery as a component of their care, such as road injuries and diabetes mellitus, which this document the National Surgical Obstetric and Anaesthesia Strategy seeks to address.

The Lancet Commission Report on Global Surgery together with the World Bank's Disease Control Priorities 3 (DCP-3) publication presented surgical care as a cost-effective intervention activating the discourse for health systems to focus on SOA services. This was followed by adoption of the resolution WHA 68.15 at the World Health Assembly in 2015, declaring emergency essential surgical and anaesthesia care as essential and indispensable components of UHC. Since then, a number of countries including some in the Sub-Saharan Region have developed National Surgical Obstetrics and Anaesthesia Plans. Zimbabwe has therefore followed suit in developing this document, the first National Surgical Obstetric and Anaesthesia Plan.

The process of developing this strategic document commenced in 2019 with a Rapid Assessment for SOA services using a WHO facility assessment tool. This allowed for comprehensive analysis of the availability and quality of critical components of safe surgical, obstetric, and anaesthesia care using the WHO six building blocks. Given that the assessment was conducted in 2019, another rapid assessment was conducted in 2022 considering investments made to the health sector during the COVID-19 response. The following is a summary of the situation analysis for SOA services in Zimbabwe.

On **Service Delivery** generally, there is limited access to surgical, obstetric and anaesthesia services in Zimbabwe at lower levels of care with an estimated 10% of district hospitals performing "Bellwether" procedures based on a 2019 SOA assessment. To indicate capacity for performing basic surgery, three procedures namely laparotomy, caesarean section and stabilization of an open fracture, have been chosen as "Bellwether" procedures to act as a proxy measure for the ability of a hospital to carry out basic surgery, anaesthesia and obstetric care. Zimbabwe national operative volumes remain below the WHO recommended target of 5000 procedures per 100 000 population by 2030.

On **infrastructure, equipment and medical supplies**, notable improvements have been noted in some respects such as provision of Oxygen as part of the COVID-19 response infrastructural investments. However, SOA services in Zimbabwe remain affected by inadequate infrastructure, equipment and erratic supply of medicines and sundries for SOA related services. This is due to the high costs as most of the medical products are imported. Most hospitals have poorly equipped and poorly functioning support services, like laboratory and radiology services. There is erratic provision of adequate surgical sundries and other commodities like, anesthetic drugs, sedatives, and other relevant medicines. Efforts made by the Government of Zimbabwe to procure

fully kitted ambulances have been noted but more needs to be done to address the inadequate ambulance services.

On the SOA **health workforce**, the surgical, anesthetic, and obstetric provider density for Zimbabwe in 2021 was 10/100,000 against a target of 20/100,000, which may have worsened due to the HRH crisis during the COVID-19 Pandemic characterized by high staff attrition. In Zimbabwe, of SOA specialists, the anaesthesia workforce remains the most deficient.

With regards to **health financing**, the landscape in Zimbabwe is comprised of domestic and external resources. Given the focus on communicable diseases which received ZWL \$12,549,308,000 as compared to non-communicable diseases which only received ZWL \$839,829,000 under the Public Health programme in the 2022 for recurrent expenditure, funding for SOA services also presents a unique challenge in Zimbabwe requiring resource mobilization through both local and global actors. Inadequate funding towards SOA from both external and domestic sources results in households funding their health care through out of pocket (OOP) expenses which may result financial impoverishment.

Under **leadership and governance**, SOA services in MoHCC do not have well organized governance structures in comparison to communicable disease programs.

On **monitoring, evaluation and research**, there has not been a defined M&E system for SOA services in Zimbabwe. Absence of this system has contributed to limited data for SOA services in the Health Management Information System to allow for evidence-based decision making. The private for-profit facilities in Zimbabwe particularly in urban areas provide a significant proportion of SOA services, however private sector SOA services data is not being captured into the Health Management Information System despite many SOA services being offered in that sector. Considering the above identified challenges this National Surgical Obstetrics and Anaesthesia Strategy seeks to achieve the following outcomes:

1. Ensure access to timely essential surgery by such that 80% of patients requiring essential SOA services within 2 hours at a district hospital by 2025 access the services
2. Improve Specialist surgical workforce density to at least 5 SOA providers per 100,000 population by 2025
3. Increase the Surgical Volume to meet 80% of the surgical need by 2025
4. Begin tracking perioperative mortality rate (POMR) and link to HMIS by end of 2022
5. Percentage incurring catastrophic expenditure for surgery, obstetrics, and anaesthesia should be reduced to zero by 2025

The above will be achieved through key identified and prioritized strategic interventions and activities which have been detailed in an implementation plan in the annexes of this document. To monitor progress a monitoring and evaluation plan supported by an M and E Framework has also been developed as part of this strategic document. The overall goal of this strategy is to attain the highest possible quality of surgical, obstetric, and anaesthesia services for all.

Some of the key strategic interventions are: (see section 3 for details)

-
- i. Built capacity for Central, Provincial and District hospitals to carry out the SOA services in compliance with the provisions within the District Core Health Services
-
- i. Establish SOA specific centres of excellence
-
- ii. Prioritize procurement of fully kitted ambulances fit for the terrain
-
- iii. Develop and implement equipment and infrastructure maintenance plans
-
- iv. Ensure availability and equitable distribution of trained and qualified SOA providers at all levels
-
- v. Establish new, renovate and upgrade existing health infrastructure (theatres, ICU/HDUs, PACUs and designated surgical wards) to serve the population and ensure equitable and timely access to SOA services
-
- vi. Systematically collect quality SOA data in a timely manner to provide information for decision making
-
- vii. Improve funding levels and establish budget lines and systems for resource tracking for SOA services to achieve Universal Health Coverage.
-
- viii. Strengthen and implement policies and strategies to improve accountability in SOA services at all levels
-

An implementation framework for SOA services has also been clearly outlined in this document for effective integrated implementation as Zimbabwe progresses towards Universal Health Coverage.



1 Situational Analysis

1.1 Background

The provision of health services in Zimbabwe is guided by the National Health Strategy 2021-2025 which feeds into the National Development Strategy 1. The aim is to contribute to the country's attainment of SDG3 targets on Health and Wellbeing by 2030. Globally, whilst notable progress has been noted for low and middle income countries (LMICs) including Zimbabwe as far as communicable diseases are concerned, progress in addressing Non-Communicable Diseases (NCDs) such as cardiovascular disease, cancer and injury has been lagging behind (Truché et al., 2020). The slow progress is due in part to the perceived low burden on NCDs as well as the perceived high costs and complexity of surgical care. This is despite the fact that in LMICs there is now a dual burden of non-communicable and communicable diseases (Meara et al., 2015). Zimbabwe faces a double burden of both communicable and non-communicable diseases with NCDs being fifth of the top 10 leading causes of death in the country in 2019, according to WHO. Several of these have surgery as a component of their care, such as road injuries and diabetes mellitus.

According to global annual reports, between 28% and 32% of the burden of disease in LMICs is attributable to diseases that are amenable to surgical care. This translates to 401 million disability-adjusted life years (DALYs) lost each year and almost double to the total combined DALYs (214 million DALYs) for Malaria, Tuberculosis and HIV (UNITAR, 2020). In a report published by the Lancet Commission on Global Surgery in 2015, approximately 70% of the world still lacked access to safe, affordable emergency and essential Surgical Obstetric and Anaesthesia care when needed (Peters et al., 2020) (Johnson et al., 2017). The situation is worse in LMICs where nine of ten people cannot access basic surgical care (Meara et al., 2015).

The Lancet Commission Report on Global Surgery together with the World Bank's Disease Control Priorities 3 (DCP-3) publication which presented surgical care as a cost-effective intervention activated the discourse for health systems to focus on SOA services. The much needed political will was then provided with the passing of the resolution WHA 68.15 at the World Health Assembly in 2015 declaring emergency and essential surgical and anaesthesia care as essential and indispensable components of UHC (Peters et al., 2020) (Johnson et al., 2017). This has resulted in countries including those in the Sub-Saharan region developing National Surgical, Obstetric and Anaesthesia Plans (NSOAPs) to address the burden of disease amenable to surgical care guided by overarching national health strategic documents (Truché et al., 2020). Whilst surgical care services provision may be viewed as disease specific, it also provides an opportunity to strengthen long term health systems investments ultimately increasing overall access to and capacity for health systems (Chao et al., 2014). If UHC is to be attained, important synergistic health services beyond primary health care along the continuum of care should be considered (Peters et al., 2020). If investments are not made to scale up surgical care, LMICs will incur losses in economic productivity estimated cumulatively at US \$12.3 trillion (2010 US\$, purchasing power parity) between 2015 and 2030 (Meara et al., 2015).

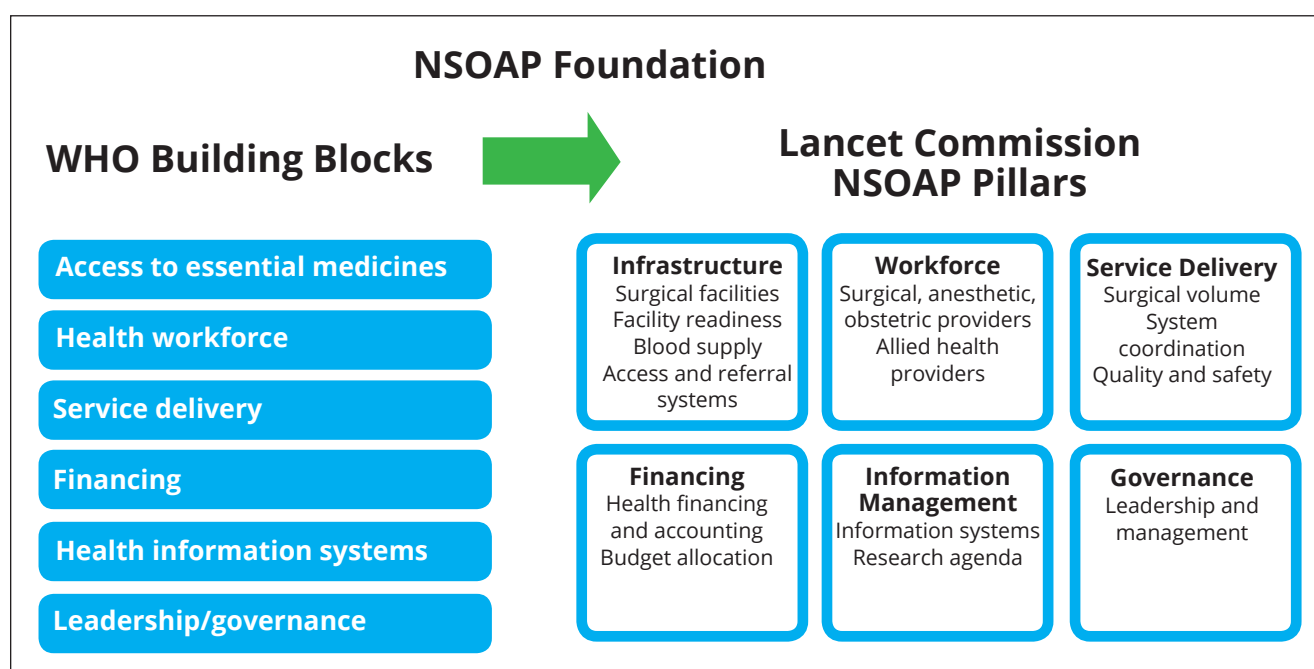
1.2 Overview of the SOA Services in Zimbabwe

Zimbabwe subscribes to the Universal Declaration of Human Rights, which provides for health care as a basic human right,(Chao et al., 2014). Furthermore, The Constitution of Zimbabwe recognizes that “Health is a Human Right”. The Constitution explicitly provides for the right to health care in Section 76, sub-section 1 to 4 that:

1. Every citizen and permanent resident of Zimbabwe has the right to have access to basic health-care services
2. Every person living with a chronic illness has the right to have access to basic healthcare services for the illness
3. No person may be refused emergency medical treatment in any health-care institution, and
4. The State must take reasonable legislative and other measures, within the limits of the resources available to it, to achieve the progressive realization of the rights set out in this section”

Considering the above, provision of SOA services has been through the five-tiered health care system starting with basic surgical services at the primary health facilities (clinics). Patients navigate the health system from the lower level (clinics) to the secondary level (district hospitals), tertiary level (provincial hospitals) and quaternary level (central hospitals). The quinary level is the most recently added tier to the health system for super specialist health services and research according to the MoHCC new structure. There are currently six national (central) referral hospitals. Each of the eight administrative provinces has a tertiary (provincial) hospital that acts as a referral center for secondary level hospitals in that province which include the district and mission hospitals.

In-order to ascertain the status of SOA services at country level, WHO recommends system wide facility assessments which are essential to understanding the availability and quality of critical components of safe surgical, obstetric, and anaesthesia care.(Johnson et al., 2017). In Zimbabwe an assessment was conducted in 2019 targeting 106 facilities. Given that this was conducted pre-COVID-19 a rapid assessment was also conducted in June 2022 to determine the most recent status. The findings from the 2019 assessment validated at a stakeholder consultation engagement workshop in April 2022 and the rapid assessment informed the greater part of the situation analysis of SOA services in Zimbabwe. The discussion in the next sections is a concise summary of the findings on the SOA services around the 6 core domains adapted from the WHO health systems building blocks (see Figure 1).

Figure 1: Adapting the WHO building Blocks to NSOAPs (Source: Peters et al., 2020)

Adapting the WHO six building blocks in the analysis allows for a comprehensive picture as SOA care requires many elements of the health system to function well. “In addition to the ecosystem within the operating theatre and capacity for postoperative rehabilitation, additional elements include community education, prehospital care, emergency department care, robust supply chains of consumables, and laboratory services” (UNITAR, 2020)

1.2.1 Service Delivery

1.2.1.1 Access to timely essential surgery

Generally, there is limited access to surgical, obstetric and anaesthesia services in Zimbabwe with an estimated 10% of district hospitals performing “Bellwether” procedures based on a 2019 SOA assessment. The same assessment noted that, 83% of provincial and central hospitals and the 10% of district hospitals were mainly mission hospitals performing the bellwether procedures. To indicate capacity for performing basic surgery, three procedures namely laparotomy, caesarean section and stabilization of an open fracture, have been chosen as “Bellwether” procedures to act as a proxy measure for the ability of a hospital to carry out basic surgery, anaesthesia and obstetric care (Peters et al., 2020). Ideally, a Bellwether hospital should be accessible within two (2) hours to ensure access to timely surgical care and the target by 2030 is for a minimum of 80% coverage of essential surgical and anaesthesia services per country by 2030. Most district hospitals (95%) in Zimbabwe provide Caesarian Sections (VMAHS, 2022). However, the national Caesarian Section rate remains low 9% with some districts not offering cesarean section at all against the ideal target of 10-15%. The main reasons for hospitals failing to offer caesarean section include lack of functional operating theatres, anaesthetic machines and anesthesia providers. Global studies have shown that for first-level hospitals (the equivalent of district hospitals in Zimbabwe), only 64% could provide a caesarean delivery, 58% could provide a laparotomy and only 40% could

provide surgical treatment for an open fracture. District-level hospitals should be able to deal with 80–90% of essential surgical conditions, therefore SOA care at this level needs serious attention if SDG3 targets are to be realized (UNITAR, 2020).

1.2.1.2 The SOA Services Referral System

Traditionally, there has been a referral hierarchy in the accreditation of facilities. However, it has been noted that some district hospitals are offering specialist care services with support from expatriate specialist doctors resulting in patients seeking services, which ideally are sought at Central Hospital level. The major challenge is that this has resulted in the staff establishment of the district hospitals not being commensurate with the volume and type of services on offer, therefore compromising on quality of the service delivery.

The referral system is faced with a number of challenges such as having the same level, cadre referrals, self-referrals, critical shortage of resources such as ambulances, on site specialist, and equipment shortages. The limited capacity at district hospital level results in unnecessary referrals to provincial and central hospitals resulting in work overload including simple cases and a compromise on quality of care. This scenario has also been documented by the Lancet Commission on Global Surgery, which noted that lack of provision at the first and district-level hospitals leads to excessive referrals to tertiary care. In addition to delaying treatment and exacerbating catastrophic expenditure, these referrals also place an undue burden on tertiary level hospitals, which often operate at 200–300% capacity (Peters et al., 2020). For Zimbabwe, this has also resulted in long waiting lists for surgical procedures at central hospitals and frequent cancellations of theatre lists for the clients, (MOHCC, reports).

1.2.1.3 Surgical volume

Zimbabwe national operative volumes remain below the WHO recommended target of 5000 procedures per 100 000 population by 2030. Most of the surgical procedures occurred at central and provincial hospitals () in 2021 compared to only at district hospital level. While provincial hospitals should be offering more specialist services than district hospitals, they are having difficulties attracting and retaining specialists. To fill in the current gap MoHCC has been riding on the integrated outreach program with the few specialist doctors from Provincial Hospitals conducting outreach activities at district hospitals while at the same time mentoring the government medical officers at this level. Private hospitals with better availability of specialist services are not widely accessible by the majority of the population, especially those in rural areas.

1.2.1.4 Quality of Care

Globally, tracking of peri-operative mortality, and post operative complications allows for assessment of the quality of SOA services on offer. For Zimbabwe there is limited consolidated data to assess peri-operative mortality through the DHIS2, which constrain the ability to monitor quality of SOA services. However, this data is available in the institutional patient records and theatre registers at the various hospitals. Multiple studies have shown that postoperative mortality in LMICs exceeds that of high-income countries. ASOS 1 and 2 study conducted in 25 African countries found that mortality rates are twice the global average when compared with high-income cohorts, despite the African patients being younger and having fewer co-morbidities

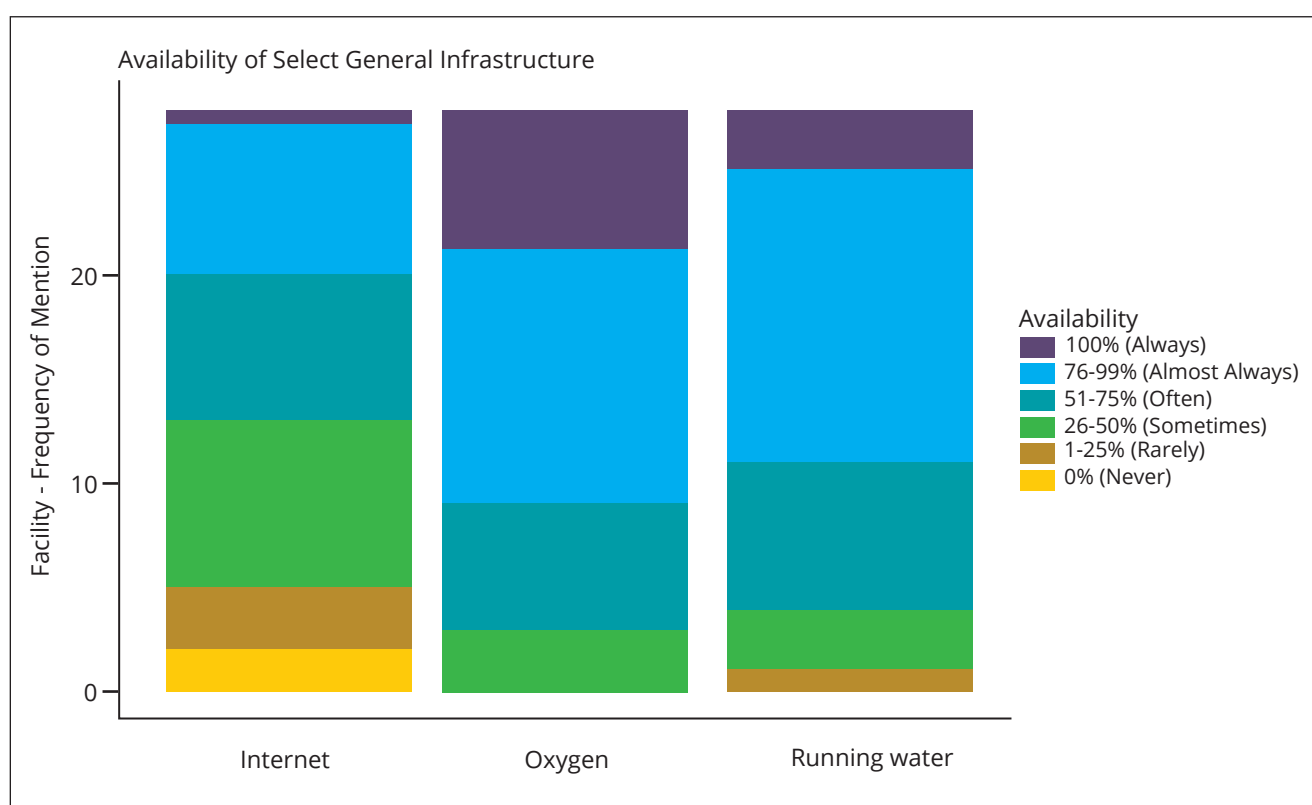
(UNITAR, 2020). The SOA Facility Rapid assessment conducted in 2019, most institutions were found not to be utilizing the surgical safety checklist.

1.2.2 Infrastructure, Supplies and Equipment

SOA services in Zimbabwe are affected by inadequate infrastructure, equipment and erratic supply of medicines and sundries for SOA related services. This is due to the high costs as most of the medical products are imported. It is well documented that Surgery in LMICs faces implementation challenges given that surgery needs more infrastructure such as clean operating rooms, anaesthesia, electrical power for monitoring equipment, and ancillary laboratory services (Chao et al., 2014). In an assessment conducted by WHO for 800 facilities in LMICs, challenges to providing surgical care included lack of electricity (31%), running water (22%), oxygen (24%) and postoperative care space (47%) (UNITAR, 2020).

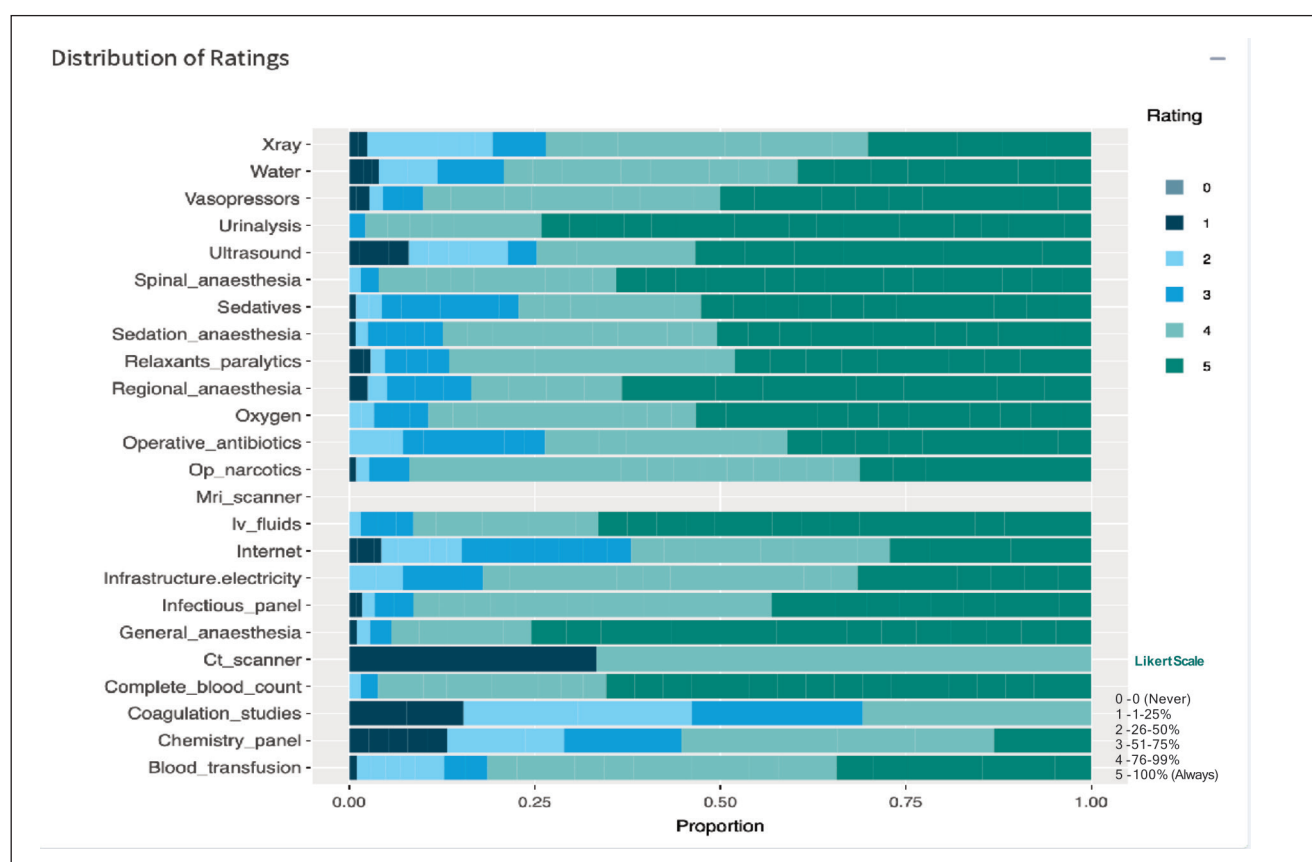
For Zimbabwe according to the assessment conducted in 2019 the findings showed erratic provision of basic resources, like running water and electricity.

Figure 2: Infrastructure availability for SOA Services (2019 SOA Assessment Report Zimbabwe)



The Government of Zimbabwe is commendable for mounting a successful COVID-19 response which has also been characterized by infrastructural investments. In light of this the 2022 Rapid SOA assessment showed that for the visited facilities, particularly on Oxygen availability improvements have been made (See the following figure).

Figure 3: Infrastructure availability for SOA Services (2022 SOA Assessment Report Zimbabwe)



With regards to infrastructure, three out of eight (Bindura, St Luke's and Marondera) provincial hospitals do not have Intensive Care Units and High Dependency Units (ICU/HDU). This has resulted in limited theatre time for the specialists at the provincial level and patients are now being referred to central hospitals for ICU facilities which affects the morale of the specialists at this level who are now working as the government medical officers. In all the districts and provinces that were surveyed in June 2022; it was noted that most facilities do not have adequate theatre suites to accommodate all the operating teams performing Bellwether procedures, no purpose-built recovery rooms and designated surgical wards for SOA services. The lack of designated surgical wards can compromise infection control protocols. District Hospitals also do not have ICU/HDU to cater for patients operated by specialists from the provincial hospitals during the integrated outreach and mentorship program discussed earlier.

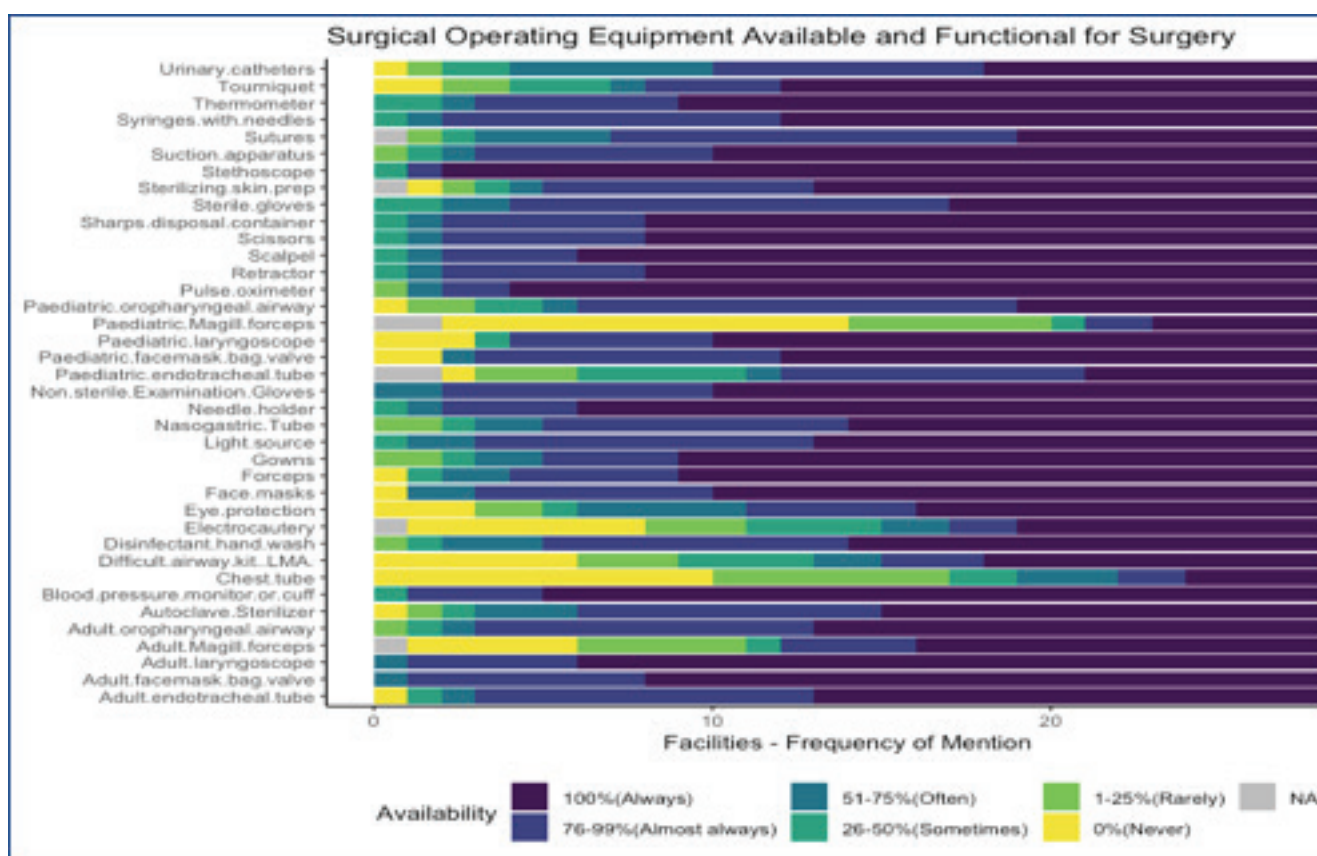
For central hospitals it was noted that approximately 57% of the theatres were functional mainly due to obsolete or lack of equipment and staff, (Table 1) Most of the district hospitals surveyed in the 2022 Rapid Assessment had obsolete anaesthesia equipment, a number of which are no longer serviceable. This has the potential of compromising patient care considering that the nurse Anesthetists and the GMO's rotated in Central Hospitals which have more modern equipment. Some theatres at district hospital level were not fit for purpose as they do not have recovery rooms e.g., one district hospital repurposed an OPD examination room to be a theatre. MoHCC has plans to expand infrastructure using new emerging technology with plans to construct 30 fully equipped facilities (22 bedded) and 5 district hospitals (60 bedded).

1.2.3 Equipment for SOA services

Though there are efforts by GOZ to re-equip hospitals most hospitals remain inadequately equipped. The main challenges in equipment are mostly due to inadequate allocation of foreign currency to procure equipment, as most of the equipment is imported. Furthermore, there is no dedicated budget to support service and maintenance of equipment. There is a critical shortage of biomedical engineers and technicians. Training of end users remains a priority.

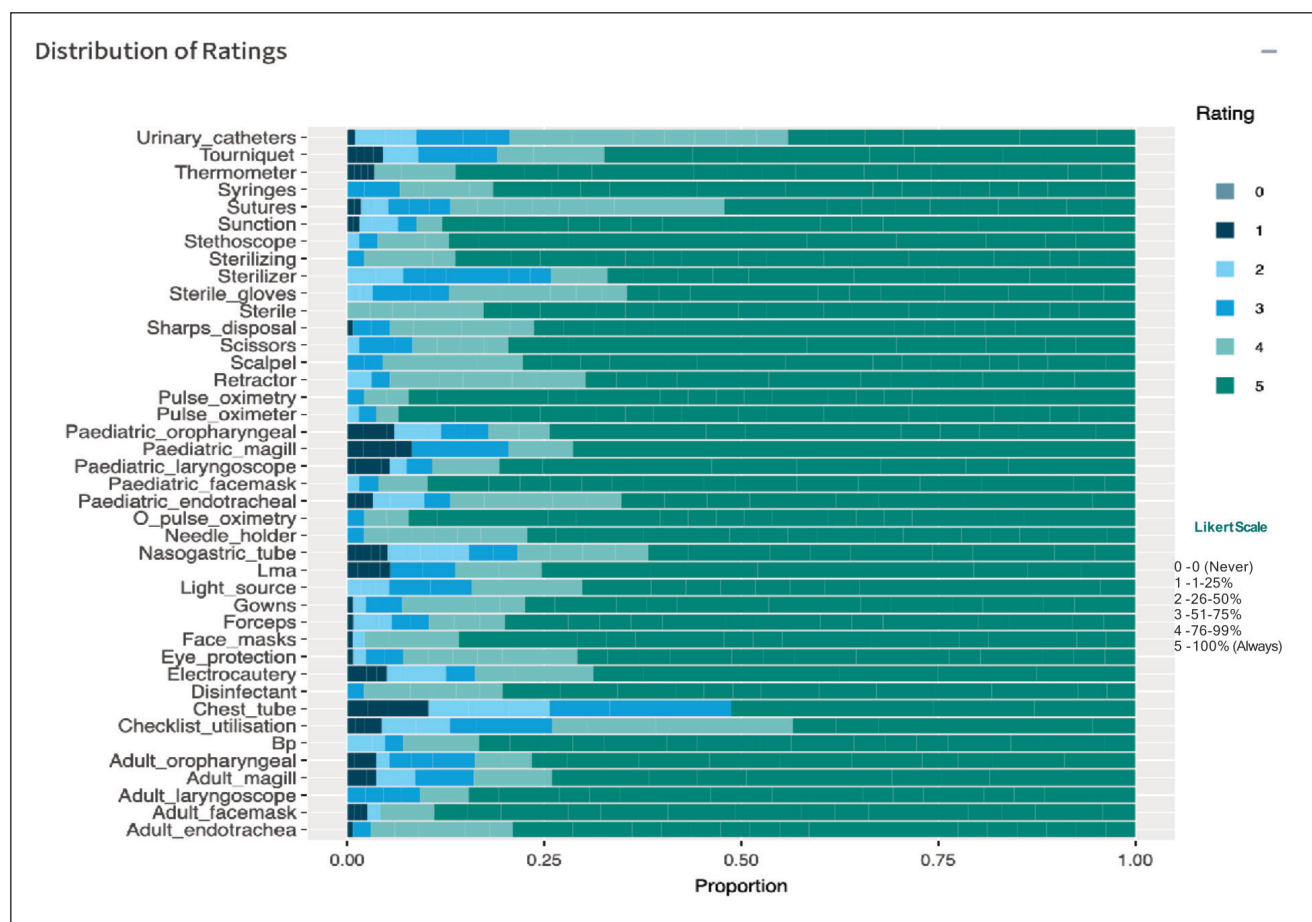
There is erratic provision of surgical and other support services equipment. As shown in the figure below whilst some facilities mentioned 100% availability of certain equipment, some institutions did not have the relevant equipment for SOA services. Of note some of the items e.g., Oral Airways, LMA's, breathing circuits which were reported as 100% available in the 2022 Rapid Assessment, were recycled disposable equipment.

Figure 4: Availability of Surgical Operating Equipment (2019 SOA Assessment Report Zimbabwe)



infrastructural investments, a similar picture was noted on equipment for SOA from the 2022 SOA Rapid Assessment as shown in the figure below.

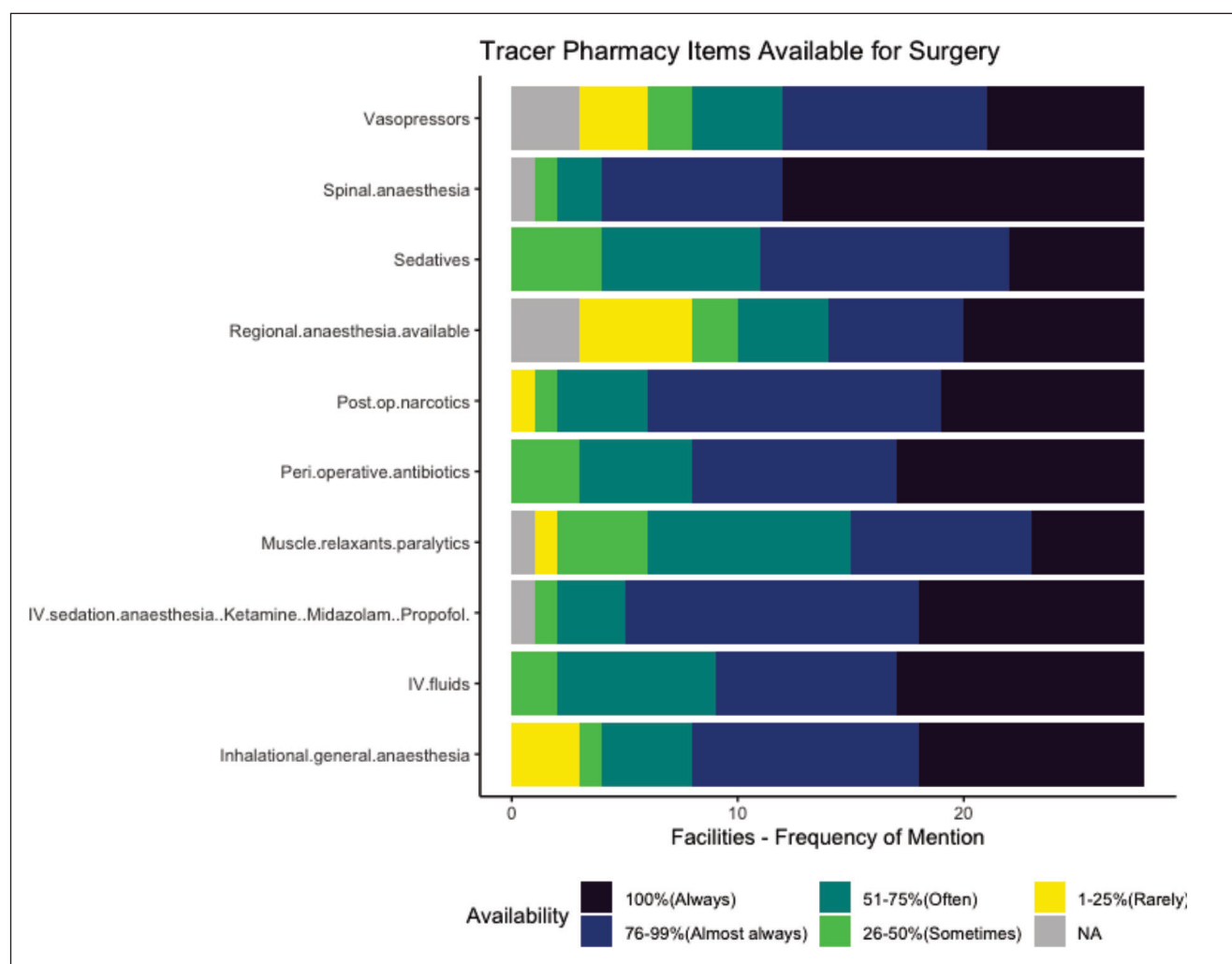
Figure 5: Availability of Surgical Operating Equipment(2022 SOA Assessment Report Zimbabwe)



Most hospitals have poorly equipped and poorly functioning support services, like laboratory and radiology services. The 2019 SOA service Rapid Assessment noted that 28 out of the 67 secondary health facilities could not run a full chemistry panel. The 5 central hospitals could run full spectrum of laboratory tests 50% of the time. Seventy two percent of district hospitals (n=57) did not have capacity for coagulation studies however 81% (N=64) had the ability to run an infectious disease panel (HIV) clearly showing the focus of investments which have been towards communicable diseases at the expense of non-communicable diseases as discussed in earlier sections. In the 2022 SOA Facility Rapid Assessment, none of the district hospitals could run a full chemistry panel and coagulation studies. This is mainly due to lack of reagents and obsolete equipment. HIV, TB and Malaria were still the microbiological tests available at all levels. However, microscopy, culture and sensitivity of the other infective agents is not routinely available in the hospitals.

There is erratic provision of adequate surgical sundries and other commodities like, anaesthetic drugs, sedatives and other relevant medicines. Generally, blood and blood products availability still remain a challenge despite the MoHCC initiative of the coupon system. As a result, some district hospitals are left with no option but to refer patients to the next level.

Figure 6: Availability of Tracer Medicines for SOA (2019 SOA Assessment Report Zimbabwe)



The major contributing factor to the erratic supply of SOA medicines at hospitals is that the required medicines are not always available at Natpharm as they are imported, **There is inadequate ambulance service.** In most districts that were assessed in the 2022 facility Rapid assessment it was noted that the ambulances were either old and broken down or ill-equipped. The same ambulances are sometimes used as service vehicles since the hospitals do not have alternative vehicles. This therefore results in delays in transfer of patients, compromised infection control protocols and also reducing the lifespan of the vehicle as it is always on the road. (Include the issue of the terrain).

1.2.4 Health Workforce

The Surgical, anesthetic, and obstetric provider density for Zimbabwe in 2021 was 10/100,000 against a target of 20/100,000, which may have worsened due to the current HRH crisis characterized by high staff attrition (see table 1 below). This challenge is not just peculiar to Zimbabwe as many LMICs have the shortage of health-care providers as a crucial constraint on the scale-up of surgical care.(Chao et al., 2014). This is also compounded by poor distribution of the available staff with a bias towards urban areas, particularly Harare. "According to WHO's

global surgical workforce database, in low-income countries the average the number of specialist SOA providers is just 0.7 per 100 000 population. In LMICs, the average of 5.5 per 100 000 is still well below the target of 20–40 per 100 000 recommended for an adequate health system' (UNITAR, 2020). From the 2019 assessment conducted for Zimbabwe, 76 % of Provincial and central Hospitals and 4% of District Hospitals had all SOA personnel.

Figure 7: Work Force Distribution in Zimbabwe (2022 SOA Assessment Report Zimbabwe)

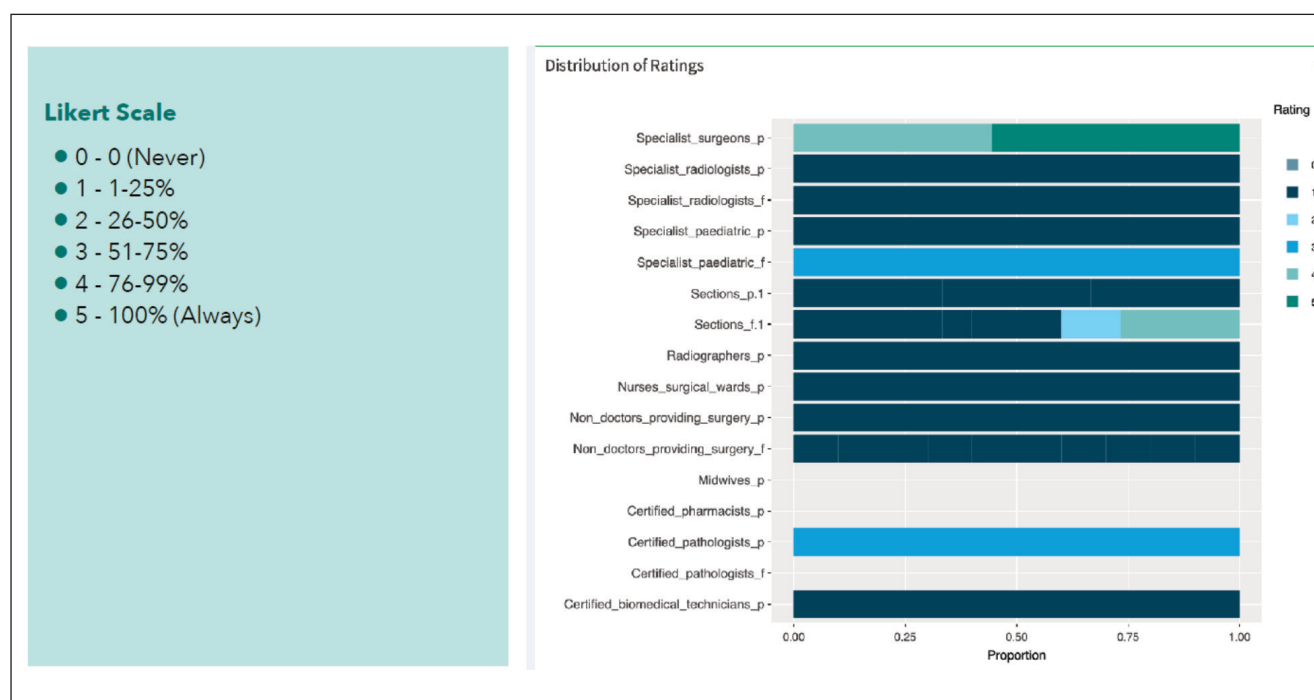


Table 1 Zimbabwe SOA Workforce (Professional Registration Councils in Zimbabwe: Medical and Dental Practitioners Council and Nurses Council of Zimbabwe)

Category	Number on Councils Register	Number in post
Surgeons	174	
Non specialist surgery providers		
Obstetricians	123	
Anaesthetists	83	
Nurse Anaesthetists	369	
Theatre Nurses	469	
Intensive Care Nurses	311	
Midwives		
TOTAL	1390 (for a population of 15million)	

In Zimbabwe, of SOA specialists, the anaesthesia workforce remains the most deficient.

In Zimbabwe the Physician Anesthetist Density is currently 0.56/100 000 population (15million population). At district and provincial hospital levels most anaesthesia services are being provided by Nurse Anesthetists. Lack of access to anaesthesia has often been cited as the major limiting factor in the quantity and complexity of surgical care delivered (UNITAR, 2020). The number and distribution of posts for SOA staff on the HR establishment has not updated to keep with population growth and movement over the years, which compounds the deficit in actual availability. For Zimbabwe, in previous years there used to be a moratorium where senior resident medical officers after completing their houseman-ship were allowed to train for the Master in Medicine (MMed) Anaesthesia without the requirement to work in the districts. However, since the removal of this moratorium, fewer doctors are coming back for the MMed in Anaesthesia program after the 2 years requirement to work in the districts before specialisation.

Whilst the notable challenges highlighted above have been affecting SOA service provision, the Health Services Board (HSB) is seized with the matter of high staff attrition. Frequent engagement of treasury for better remuneration of HCW has been a constant feature for the HSB. Unfortunately, with limited fiscal space, the challenge is that government is responsible for catering for the public service wide improved remuneration and not just focus for health workers. Midwifery training has now been reduced to one year from two years as this was now a disincentive for nurses to go for this post basic training. Nurse tutors will be upgraded to lecturers moving forward, and this will result in improved remuneration given that there has also been a reported high nurse tutor turnover with the current HRH crisis.

1.2.5 Financing

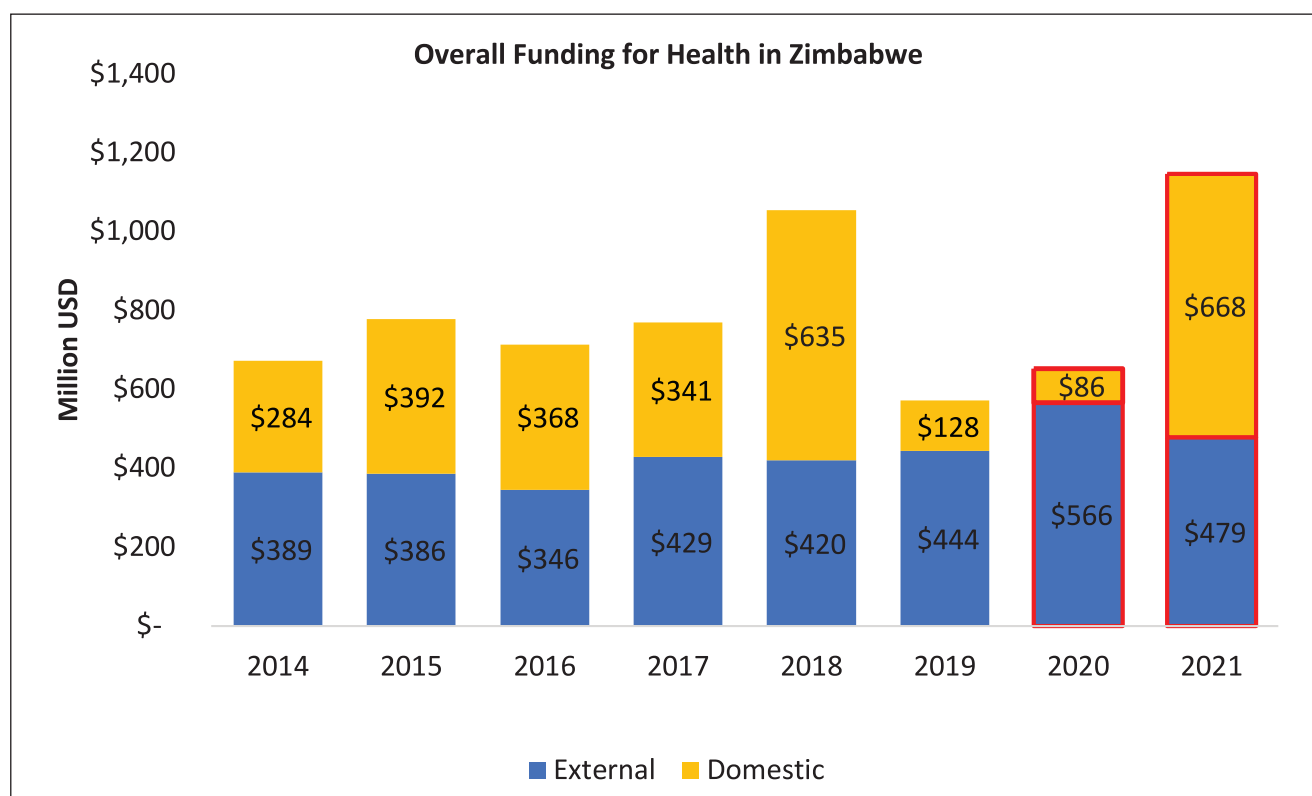
The health financing landscape in Zimbabwe is comprised of domestic and external resources (see figure 5). Since 2014, MoHCC has been conducting Resource Mapping and Expenditure Tracking exercises on an annual basis. Over the years there has been increasing allocation of domestic resources towards health such that in 2021 when the COVID-19 related allocations are considered, Zimbabwe met the Abuja Target of allocating at least 15% of the national budget towards the health sector.



For Zimbabwe, in previous years there used to be a moratorium where senior resident medical officers after completing their houseman-ship were allowed to train for the Master in Medicine (MMed) Anaesthesia without the requirement to work in the districts.

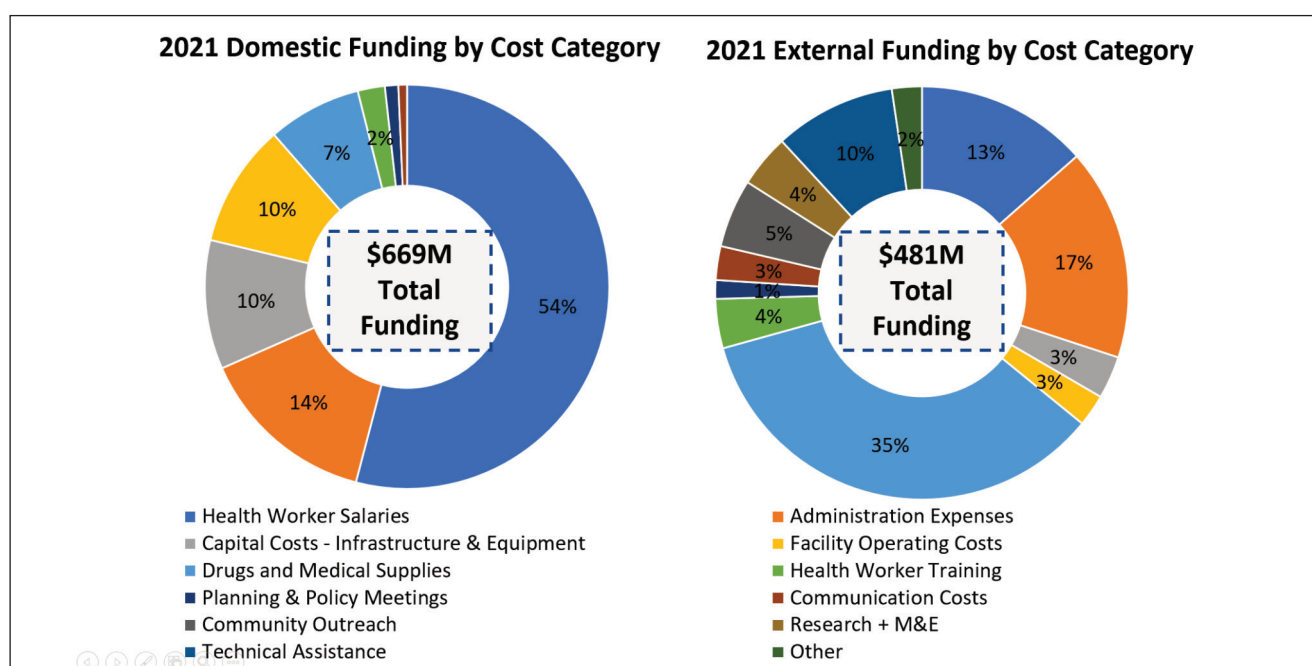


Figure 8: Overall Funding for Health in Zimbabwe (MoHCC Resource Mapping Report 2021)



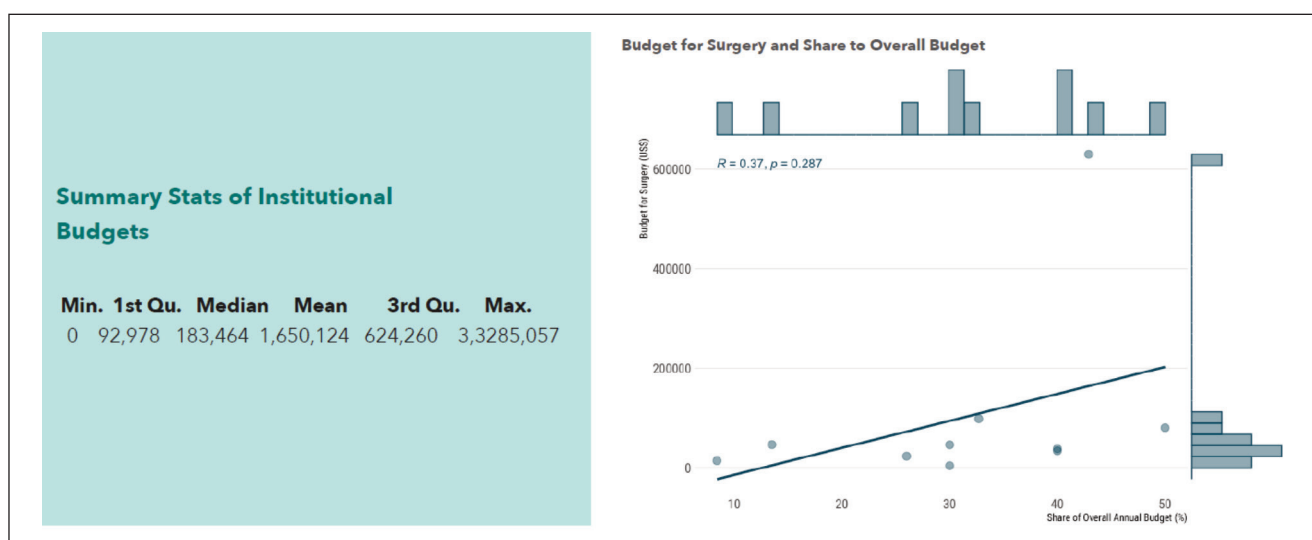
Whilst the increased domestic funding towards has been noted, a further analysis has shown that a bigger percentage has been towards health care workers' salaries (54% for 2021) as shown in Figure 6 below, with only 10% towards infrastructure and equipment and 7% towards medicines.

Figure 9: Domestic Funding and External Funding by Cost Category 2021 (MoHCC Resource Mapping Report 2021)



Given the focus on communicable diseases which received \$12,549,308,000 as compared to non-communicable diseases which only received \$839,829,000 under the Public Health programme in 2022 for recurrent expenditure, funding for SOA services also presents a unique challenge in Zimbabwe requiring resource mobilization through both local and global actors. LMICs are estimated to potentially lose up to 2% of their economic growth by 2030 if no investments are made towards SOA care systems, (Truché et al., 2020). Resource mobilization can only be effective with adequate advocacy for increased funding towards SOA services. Having SOA services in national strategic documents, which are key advocacy tools, shows the importance and allows for political commitment to improved funding allocation. Unfortunately in a 2015 study of national health plans in sub-Saharan Africa, 63% of plans had less than five mentions of surgery and 33% had no targets relevant to surgery in contrast to 95% of the national health plans adequately reporting the prevalence of HIV, tuberculosis, infant mortality and maternal mortality, with associated targets for each (UNITAR, 2020). This therefore results in limited allocation of resources for SOA both from domestic and external sources as reflected in the graph below.

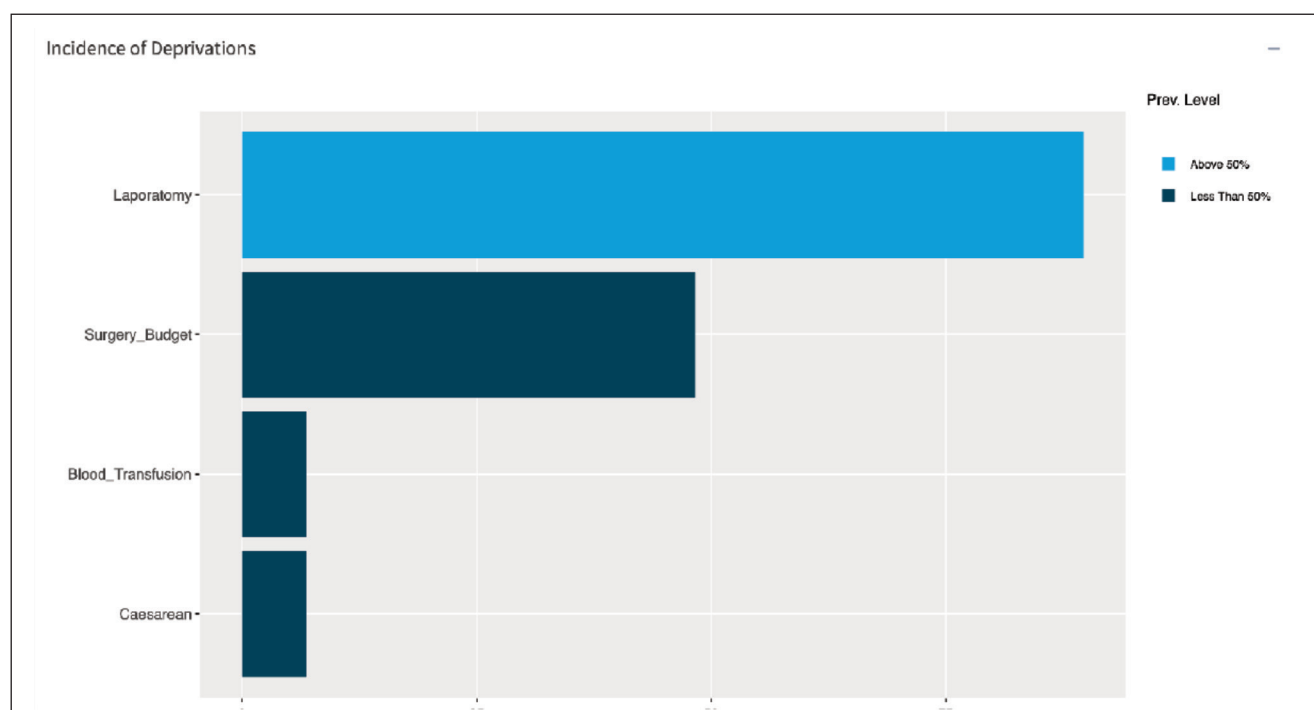
Figure 10: Financing for SOA (2022 SOA Rapid Assessment Zimbabwe)



Compounding this is the fact that budget allocation for SOA cannot be tracked as there are not defined categories and indicators for this. However, a desk review of 2022 budget for curative services using proxy SOA tracer services (medical gas, blood services, x-ray, surgical supplies) shows that 6.22% of the budget was allocated to core SOA services.

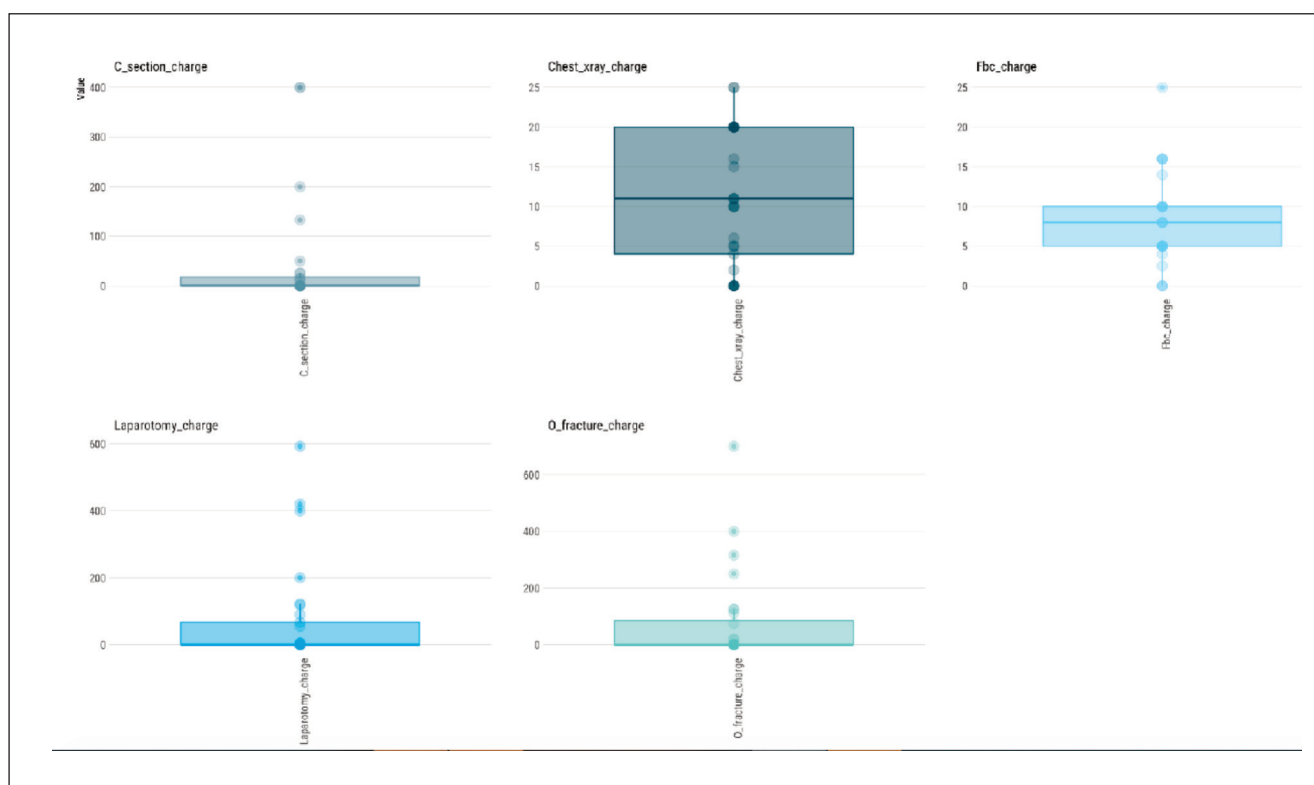
Inadequate funding towards SOA from both external and domestic sources results in households funding their health care through out of pocket (OOP) expenses which may result financial impoverishment. According to Meara et al., 2015, a quarter of people who have a surgical procedure experience financial catastrophe more so if they are from LMICs and the burden is worse on the poor. In the case of Zimbabwe according to the 2019 NHA report, the catastrophic health expenditure was found to be at 9%. However, triangulation with the PICES survey showed the possibility of most people were foregoing care. Financial barriers to seeking surgical care are in two ways, patients may be prevented from seeking care or for those who choose to receive care they are left catastrophically impoverished.

Figure 11: Financial Deprivations for SOA Services (2022 SOA Rapid Assessment Zimbabwe)



The cost for a caesarian section in a public institution in Zimbabwe is around USD \$600, whilst in the private sector at least USD \$1400 may be required (UNITAR, 2020).

Figure 12: Cost of SOA Services at Institutions in Zimbabwe (2022 SOA Rapid Assessment Zimbabwe)



Those covered by the private medical insurance schemes face the challenge of inefficient reimbursement mechanisms as they are usually asked to make co-payments for them to access SOA care.

1.2.6 Governance and Leadership

SOA services in MoHCC do not have well organized governance structures in comparison to communicable disease programs. For instance, communicable diseases such as HIV and TB have specific units, unlike SOA. Another challenge has been weaknesses in management of the programme resulting in unnecessary referrals to provincial hospitals due to reasons requiring leadership at district hospital level such as lack of specific SOA consumables. The HSB has however strengthened this area as recruitment of management positions have a master's qualification in leadership and management qualification as a requirement.

Generally, quality of documentation and clinical audits is poor. In 2022, the MoHCC started implementation of the Health Sector Coordination Framework which provides new opportunities for strengthening governance of SOA services through the Hospital Service Technical Working Group.

1.2.7 Monitoring, Evaluation and Research

There has not been a defined M&E system for SOA services in Zimbabwe. Absence of this system has contributed to limited data for SOA services in the Health Management Information System to allow for evidence-based decision making. The Lancet Commission on Global Surgery and WHO have recommended 6 indicators to be tracked globally for cross comparison among countries by 2030 (Peck and Hanna, 2018). Zimbabwe is currently not tracking the Lancet Commission on Global Surgery Indicators, however the country is tracking 2 Indicators for SOA services in the Weekly Routine Monitoring Report namely; Cesarean Sections done and Major Surgeries done. In Zimbabwe there is heavy reliance on a paper-based system by most of the hospitals offering SOA services. Only 7 hospitals were utilizing the Electronic Health Record (EHR) in the 2019 assessment. MoHCC is currently rolling out EHR, but this process has started with the primary health care centers due to the simplicity of service package at this level. Given the complexity of services offered at Provincial and Central Hospitals, the EHR module on SOA is yet to be developed. The heavy reliance on the paper-based system limits research as accessing patient records is cumbersome. This contributes to limiting efforts to ensure that surgical care policies are evidence-based and that interventions are cost-effective and clinically beneficial (Truché et al., 2020).

Whilst clinical audits are being performed, these are only limited to maternal and newborn health issues. Another challenge is the poor quality and documentation of such clinical audits. There are limited evaluations that have been done on SOA services, which limits availability of evidence-based decisions.

Another observation is that the HS3/5 form which is used to capture hospital services, has a small section on SOA, which is inadequate to inform decision. This is coupled with limited knowledge by the clinicians, who have not been capacitated on the HMIS

Private sector reporting in Zimbabwe to the HMIS has been a challenge in general. **Private sector SOA services data is not being captured into the Health Management Information System despite many SOA services being offered in that sector.** One of the major hindrances is the nature of the current tools which are too voluminous to enable private sector reporting given their limited staffing. Whilst a regulatory framework is in place, the issue of reporting is not included as part of the licensing requirement for private sector which is done annually.



The heavy reliance on the paper-based system limits research as accessing patient records is cumbersome. This contributes to limiting efforts to ensure that surgical care policies are evidence-based and that interventions are cost-effective and clinically beneficial





2 Strategic Direction

2.1 Vision

Highest quality of life for all Zimbabweans by 2030

2.2 Mission

To provide **accessible, timely and quality surgical**, obstetric, and anaesthesia services to all in need of care in Zimbabwe.

2.3 Goal

To attain the highest possible quality of surgical, obstetric, and anaesthesia services for all.

2.4 Guiding Principles

a. Equity	Provision of surgical, obstetric, and anaesthesia services and care to everyone according to need regardless of social background.
b. Quality	Provision of appropriate services ensuring safety, good surgical, obstetric, and anaesthesia outcomes and meeting the expectations of clients (including reducing waiting times and care delays for those receiving care).
c. Essential	Provision of all Bellwether procedures at relevant hospitals ensuring clients receive services within 2 hours
d. Partnerships	Strengthening partnerships and collaborating across sectors on health matters including team work
e. Efficiency	Provision of surgical, obstetric, and anaesthesia services and care in a timely and cost effective manner without waste of resources.
f. Professionalism	To abide to the dictates of the profession which include Empathy, Integrity and, Patient centeredness

2.5 SOA Service Priorities/Outcomes

In 2015 the Lancet Commission on Global Surgery developed six indicators to evaluate progress towards timely access to safe surgical, obstetric and anaesthesia. Whilst the aim of these indicators was to capture access to surgery, surgical workforce, surgical volume, perioperative mortality rate, and catastrophic and impoverishing financial consequences of surgery, limitations were noted. Data points from which to derive the indicators were not defined, limiting comparability across time or settings. As a result global experts convened to evaluate and explicitly define for the first time the indicators to improve comparability and support achievement of 2030 goals to improve access to safe affordable surgical and anaesthesia care globally. The revised set of indicators (Utstein indicators) have been adopted for this SOA strategic document for Zimbabwe as shown in the table below.

Table 2 The SOA Service Priorities and targets

	Priority Intervention	Minimum Standard	Baseline Estimates	Target 2025/2030
a	<i>Access to timely essential surgery</i>	Proportion of a country's population with geographic access (within 2 hours) to a facility capable of providing surgical and anaesthesia care for the Bellwether procedures (caesarian section, laparotomy, and surgical management of open long bone fracture)		Min 80% of patients requiring essential SOA services within 2 hours at a district hospital by 2025
b	<i>Specialist surgical workforce density</i>	Number of each of surgery, obstetric, or anaesthesia providers who are actively practicing per 100 000 population.		At least 5 SOA providers per 100,000 population by 2025
c	<i>Surgical Volume</i>	Number of surgical procedures done in an operating theatre using any form of anesthesia per 100,000 population per year		Meet 80% (XX% procedures per 100,000) of the surgical need by 2025
d	<i>Perioperative mortality</i>	Deaths from all causes, before discharge (up to 30 days), in all patients who have received any anaesthesia for a procedure done in an operating theatre, divided by the total number of procedures, per year, expressed as a percentage.		Begin tracking perioperative mortality rate (POMR) and link to HMIS by end of 2022
e	<i>Financial-risk protection</i>	Percentage of the population at risk of catastrophic expenditure if they were to require surgical procedure		Percentage incurring catastrophic expenditure for surgery, obstetrics, and anaesthesia should be reduced to zero by 2025

3 Strategic Interventions

3.1 Service Delivery

Strategic Objective 3.1

Strategic Outcome: Improved SOA Service Delivery

Strategic Objective: To ensure that all people in need of SOA services receive quality and timely care at all levels of the healthcare system.

Table 3 Service Delivery Strategic Interventions

No	Strategic Direction	Illustrative Interventions	
3.1.1	Address gaps in access, quality and improve SOA service availability and service readiness	ix.	Built capacity for district hospitals to carry out the SOA services in compliance with the provisions within the District Core Health Services
		x.	Build capacity for provincial hospitals to carry out SOA services
		xi.	Build capacity for central hospitals to carry out SOA services
		xii.	Scaling up outreach services and mentorship programs
		xiii.	Decentralise paediatric SOA services
		xiv.	Palliative Care Integration
		xv.	Prioritize procurement of fully kitted ambulances fit for the terrain
3.1.2	Enforcement of standards-based SOA Quality Services	xvi.	Develop and implement equipment and infrastructure maintenance plans
		i.	Integration of statutory instruments governing the conduct in SOA service delivery into pre-existing instruments.
		ii.	Review and enforce the referral policy to ensure patients receive timely care at the nearest equipped health facility
		iii.	Enforce responsibility, professionalism and accountability and disciplinary action
		iv.	Promote transparency and accountability in procurement of SOA equipment and products
3.1.3	Engage and work with communities in improving SOA service outcomes	v.	Enforcement of use and compliance to SOA quality guidelines
		i.	Engage the community in health education promotion programs to appraise them of the referral policy, patient's rights and responsibilities in prevention, access and utilization of SOA services.
		ii.	Appraise the community and build confidence on available SOA services at all levels.
3.1.4	Recognition and support of SOA subspecialties	iii.	Engage community development committees.
		ii.	Review the regulatory frameworks regarding recognition and registration of sub specialities
		iii.	Identifying and equipping facilities to carry out sub-speciality SOA services
		iv.	Establish SOA specific centres of excellence

3.2 Health Workforce for Surgical, Obstetric, and Anaesthesia

Strategic Objective 3.2

Increase the number of and retain trained SOA providers ensuring numerical adequacy at all levels of health care in Zimbabwe.

Table 4 Health Workforce for SOA Services Strategic Interventions

No	Strategic Direction	Illustrative Interventions	
3.2.1	Address numerical adequacy gaps of SOA service providers	i.	Ensure availability and equitable distribution of trained and qualified SOA providers at all levels
		ii.	Train SOA providers and ensure maintenance of the quality standards of education and practice
		iii.	Ensure all SOA providers are updated in terms of their medical knowledge and skills required to provide safe care
3.2.2	Improve conditions of service, bonding and retention mechanisms	i.	Implement mechanisms to ensure SOA providers with specialized skills are placed in appropriate salary scales
		ii.	Competitive Locum rates
		iii.	Develop and implement policies that require mandatory minimum service provision to public hospitals by private practitioners
3.2.3	Expand the establishment to provide positions that will meet the demand for SOA services	i.	Revise establishment for hospitals to enable attainment of ideal SOA provider densities
3.2.4	Improve SOA service providers welfare and development	i.	Review remuneration of SOA providers
		ii.	Incentive relocations for specialists
		iii.	Ensure availability and equitable distribution of trained and qualified SOA providers at all levels
		iv.	Provide and support leadership and career advancement training to improve interpersonal relationships and personal growth amongst health care workers.

3.3 Infrastructure Equipment And Products

Strategic Objective 3.3

Expand equitable access to improved SOA service and care infrastructure that is appropriately equipped

Table 5 Infrastructure, Equipment and Products Strategic Interventions

No	Strategic Direction	Illustrative Interventions	
3.3.1	Provide sustainable and appropriate infrastructure and equipment needed for the delivery of safe surgery, obstetrics, and anaesthesia at all levels of the health care system	i.	Establish new, renovate and upgrade existing health infrastructure (theatres, ICU/HDUs, PACUs and designated surgical wards) to serve the population and ensure equitable and timely access to SOA services a. Establish new facilities fit for purpose at primary and secondary levels of care b. Involve end users in the planning/designing of new structures and structures to be renovated c. Develop standards and guidelines for theatre infrastructure and equipment at different levels of care
		ii.	Improve SOA infrastructure for tertiary and quaternary care facilities a. Renovate and upgrade existing health facilities b. Develop new health infrastructure for quinary SOA care services
		iii.	Procure, and equip ambulances and strengthen referral management for SOA services
		iv.	Procure equipment for endoscopy and minimal access surgery a. Engage tertiary and quaternary facilities to prioritise equipment used in endoscopy and minimal access surgery b. Engage end-users in procurement of essential equipment c. Evaluate donated equipment for usability before acceptance and distribution
		v.	Procure, rehabilitate and maintain SOA equipment and infrastructure a. Regular training of technicians on equipment maintenance to strengthen equipment maintenance service b. Establish service level and maintenance agreement with the suppliers to conduct preventive maintenance of equipment for SOA services c. Ensure end-users are regularly trained on use and cleaning of essential equipment
3.3.2	Ensure availability of quality and affordable supplies for safe SOA	i.	Ensure adequate stocks of essential medical and surgical supplies so as to provide safe and quality SOA services a. Vet suppliers and ensure they meet minimum standards b. Strengthen systems for procurement and management of essential SOA supplies to ensure consistent access to affordable essential medical and surgical supplies and medicines
		ii.	Promote blood donation programs and ensure adequate supply and storage of blood and blood products. a. Resuscitate the capacity of blood banks at provincial and district levels

3.4 Monitoring, Evaluation and Research

Strategic Objective 3.4

Systematically collect, process, and utilize quality SOA data in a timely manner to inform decision making.

Table 6 Monitoring, Evaluation and Research Strategic Interventions

No	Strategic Direction	Illustrative Interventions	
3.4.1	Systematically collect quality SOA data in a timely manner to provide information for decision making.	i.	Standardize the HMIS data collection tools to include SOA a. Include the SOA surgical procedures in the EHR b. Implement the EHR to all levels of the health care system. c. Use of existing staff in HIS for entering data to speed up the update of the HER d. Include SOA reports in DHIS2
		ii.	Digitize the SOA service provision
		iii.	Expand internet connectivity at all levels
		iv.	Include submission of SOA data as part of licensing and renewal for SOA providers and private health facilities
Ensure SOA programme data	Conduct Oversight Activities	i.	Ensure SOA programme data
	Ensure ease of access to SOA scientific data for timely decision making	i.	Evaluations
	i.	ii.	SOA operational research (rapid assessments and surveys)

3.5 Healthcare Financing

Strategic Objective 3.5

Ensure sustainable funding for Surgical, Obstetric, and Anaesthesia Care

Table 7 Health Financing Strategic Interventions

No	Strategic Direction	Illustrative Interventions	
3.5.1	Improve funding levels and establish budget lines and systems for resource tracking for SOA services so as to achieve Universal Health Coverage.	i.	Establish cost of SOA services to determine the funding levels required for SOA care services
		ii.	Improve funding for SOA services and strengthen resource mobilization from insurance providers
		iii.	Implement measure to reduce wastage of resources
		iv.	Efficient use of available resources

3.6 Leadership And Governance

Strategic Objective 3.6

Improve leadership and governance of surgical, obstetric and anaesthesia service delivery at all levels.

Table 8 Leadership and Governance Strategic Interventions

No	Strategic Direction	Illustrative Interventions	
3.6.1	Strengthen and implement policies and strategies to improve accountability in SOA services at all levels	i.	Strengthen the policy, strategies and guidelines for SOA services and enforce their implementation
		ii.	Implement a leadership and management capacity development plan for all levels
		iii.	Establish and Support SOA Coordination framework at all levels (organogram)
		iv.	Ensure integration of palliative care in all SOA services and other health policies
3.6.2	Promote research and evidence generation for effective SOA program development and policy	i.	Establish the true burden of Non-communicable Diseases (NCDs)



4 Implementation Framework for the National Surgical Obstetric and Anaesthesia Strategy

Implementation of this strategy will be guided by the Integrated Results Based Management Framework.

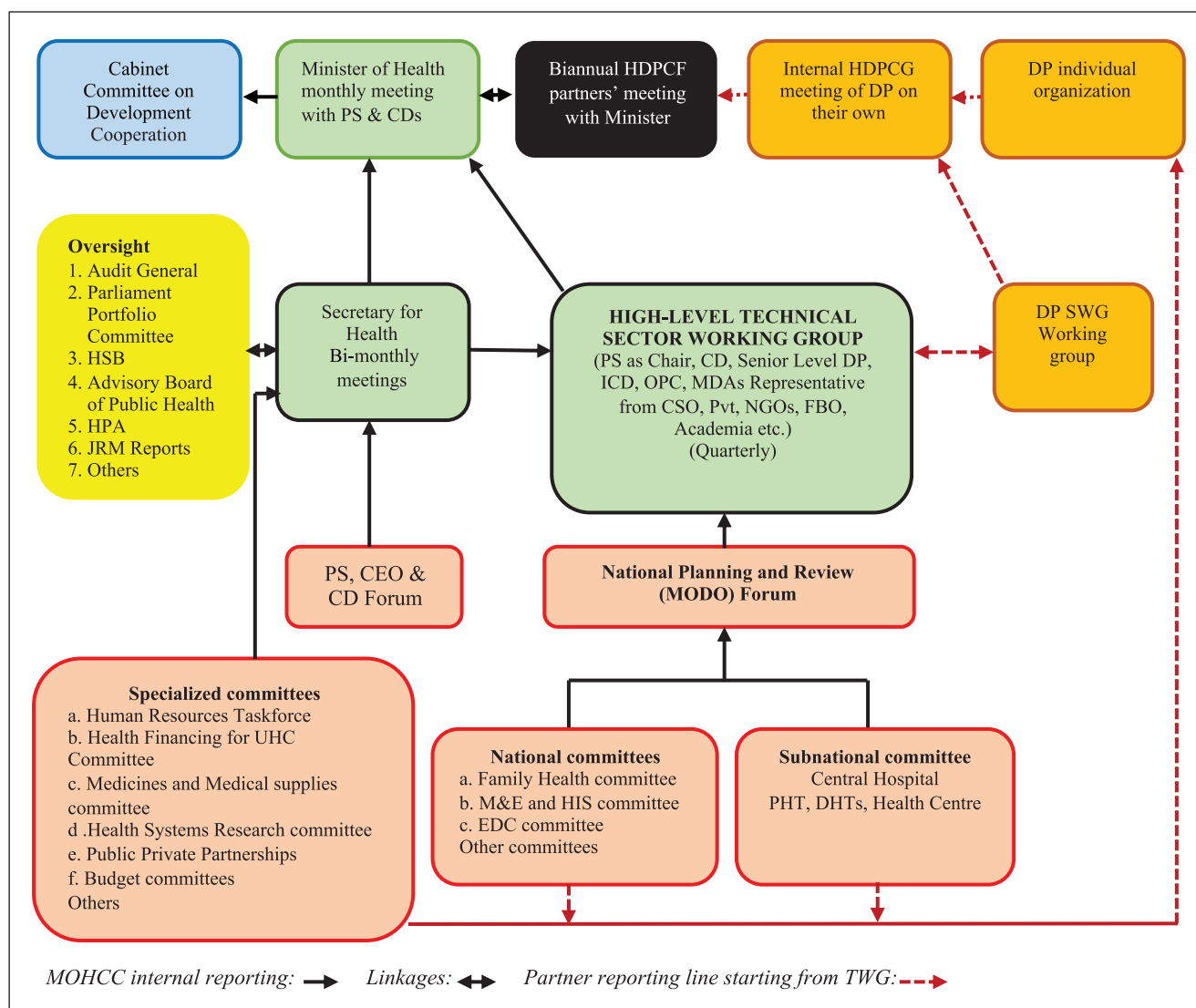
The results based framework is an enhanced Performance Accountability System which has been put in place following a whole of government approach, through the Permanent Secretary's Performance Contract, with the Permanent Secretary at its apex. This include simple formats for quarterly Operational plans linked to Departmental Integrated Program Agreements (DIPAs), Ministry Annual Strategic plans and National Health Strategy, which this strategic plan will feed into. An implementation plan (see annex) has also been developed as part of this strategy to ensure effective implementation.

Therefore, the governance structure to oversee implementation of this strategic document will rely on existing platforms that have been set up by MoHCC in the Health Sector Coordination Framework as shown in the figure below. The MoHCC has developed the Health Sector Coordination Framework whose overall objective is "To coordinate efforts by the MOHCC and all stakeholders in financing, planning, implementation including monitoring and evaluation of all health-related interventions, to maximize health outcomes among the people of Zimbabwe".

As highlighted in the situation analysis and later elaborated in the strategic direction and illustrative intervention section, clear governance structures for SOA services are a key factor to successful implementation of this strategy. The identified structure for SOA services will feed into the existing MoHCC structures for sustainability and effective coordination. To operationalize the implementation of the Health Sector Coordination Framework, the MoHCC has set up Technical Working groups which will include the SOA Technical Working group. The SOA TWG will comprise of MoHCC, SOA Professional Associations, Private Sector, Health Development Partners, and UN Technical Agencies.

As highlighted in the situation analysis and later elaborated in the strategic direction and illustrative intervention section, clear governance structures for SOA services are a key factor to successful implementation of this strategy.

Figure 13: Consolidated Health Sector Partner Coordination Structure (Health Sector Coordinantion Framework 2019)



4.1 Financing the National Surgical Obstetric and Anesthesia

4.2 Projected cost of the National Surgical Obstetric and Anesthesia and gap

5 National Surgical Obstetric and Anesthesia M&E Plan

5.1 Introduction of the Monitoring and evaluation Plan

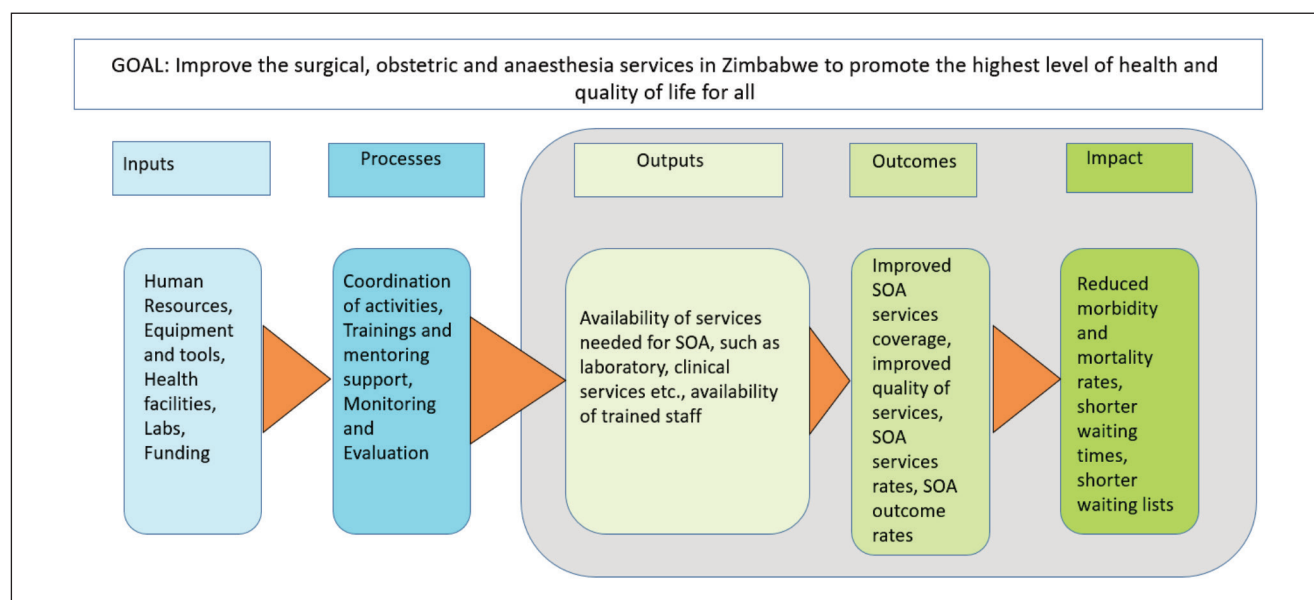
The Health Sector Monitoring and Evaluation Plan 2021-2025 outlines the principles that guide Monitoring and Evaluation (M&E) in the Health Sector. The SOA M&E Plan is informed by the health sector monitoring and evaluation plan. This Plan seeks to establish a monitoring and evaluation system for Surgical, Obstetric and Anesthesia Services in Zimbabwe .

5.2 Goal

The overall goal of the M&E Plan is to provide a framework for regular and systematic tracking and documenting of progress in the implementation of the National SOA Strategic Plan . The plan also seeks to define mechanisms and processes for systematic and structured tracking of progress towards SOA strategy objectives and performance targets.

5.3 Theory of Change

Figure 14: Theory of Change for SOA Services in Zimbabwe



5.4 Data Management

5.4.1 Data collection

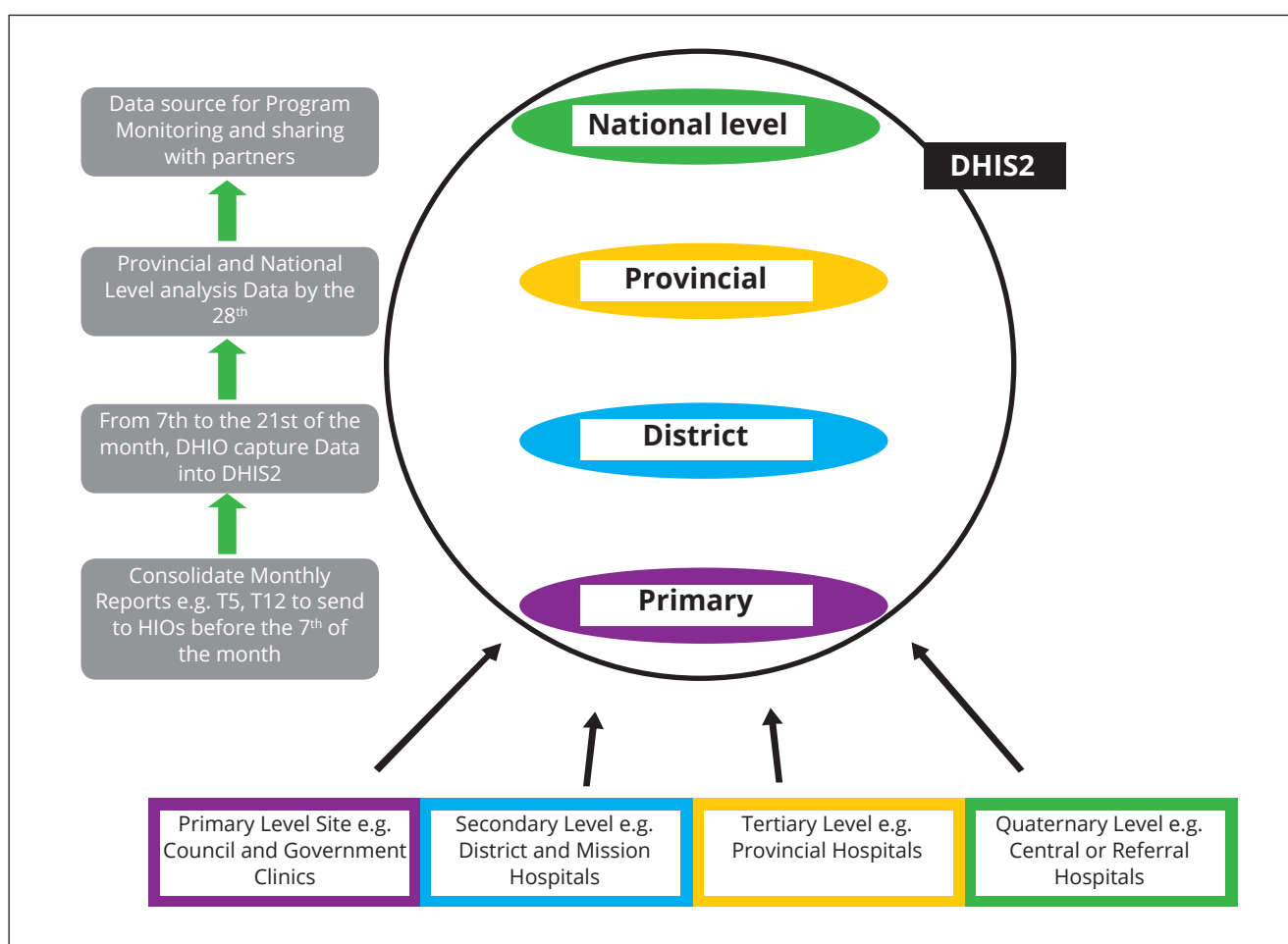
Standard data collection tools (registers, templates) will be developed in consultation with stakeholders. The developed data collection tools will allow for disaggregated data to be collected and disseminated at all levels of care. The current improvised tools will be incorporated in the

tools that are going to be developed. Develop a checklist or AIDs to guide the clinicians to be able to fill in the SOA data collection tools. Develop a curriculum for training all staff involved in SOA data collection. SOA indicators will be added to DHIS2. The ultimate aim is to have a SOA module in EHR.

5.4.2 Reporting

Review the current reporting templates to include SOA data elements. In consultation with all stakeholders, a list of all priority SOA indicators will be agreed upon for reporting. This list of priority indicators will be reported through the DHIS2 and other Health Information Management systems. The reporting of SOA data will be in line with reporting timeliness in the Ministry. The flow of data is illustrated in the diagram below.

Figure 15: Reporting Structure for Health Facilities in Zimbabwe



Data Quality - Data quality principles will be adhered to at all levels of data collection. All the data will be validated at the institution of collection before being reported to the next level. Onsite data verification, spot checks and data quality audits will be undertaken routinely and periodically to ensure data meets the minimum standards. SOPs and guidelines will be developed and distributed to all levels to ensure data quality assurance. Key players in SOA will be capacitated in processes that ensure data quality.

1. Data Analysis, Dissemination and Use

A standard data analysis plan will be developed for all levels of the M&E system. The M&E sub-committee will develop a data analysis plan for use at all levels that will serve as a guide on how to analyze and interpret data. Different software will also be used in the analysis of data depending on availability and the purpose of the report. Monthly, quarterly and annual data analysis meetings will be conducted at all levels to produce reports for dissemination. A detailed data dissemination plan will be developed. Feedback sessions will be conducted both physically through meetings, workshops and electronically through web-portals, situation rooms, websites, dashboards and online meeting platforms to stakeholders at all levels. The reports produced will be simplified and will have an action matrix (std. template) annexed to ensure evidence based decisions by the stakeholders.

2. Data Storage

All the SOA data collected manually will be stored in files using an established standard record archiving system at all levels. SOA data collected electronically will be stored electronically in the HMIS servers. Specific databases will also be created in the existing HMIS databases to manage both composite and disaggregated SOA data.

5.5 NSOAS routine oversight

Oversight activities will be conducted by key players in NSOAS routinely during programme implementation. The oversight activities will include but not limited to support and supervisions, routine monitoring, mentorship, hand holding activities, spot-checks and onsite data verification missions. The frequency of these activities is based on issues, type of mission or other relevant factors. Frequency ranges from weekly, monthly and quarterly or annually. A detailed activity matrix will provide the details with regards to the scope and frequency of these activities.

5.5.1 Evaluation, Survey and Research

SOA research agenda will be developed to guide operational research which will generate key information to guide evidence based decision making in programming. The following NSOAS evaluations will be conducted:

- Baseline assessments
- Process evaluations
- Mid-term evaluation
- End of term evaluations
- Impact evaluation

These will be conducted to measure the effectiveness of strategies and interventions. Key rapid assessment and surveys will also be conducted to augment and triangulate data for evidence-based decision making. A database for all the research, surveys and evaluations conducted will be created for future reference. Key players in the SOA processes will be capacitated with research and evaluation skills for them to conduct the processes internally.

5.5.2 Operationalization of the M&E Plan

- The key players in SOA must be capacitated with knowledge and skills development to conduct M&E activities.
- Provision of tools of trade to be able to conduct M&E functions (laptop, data, stationary etc.,)
- Management at all levels should ensure that focal persons are adequately capacitated to conduct M&E for programmers.
- A dedicated budget of 10% must be allocated for NSOAS M&E



Key rapid assessment and surveys will also be conducted to augment and triangulate data for evidence-based decision making.





6 Annexes

6.1 Monitoring & Evaluation Framework

Outcome	Output	KPI	KPI definition	Baseline value (year)	Data source	Frequency	2022	2023	2024	2025
Improved SOA Service Delivery	Surgical procedures conducted	Surgical volume rate (Disaggregate by adults and Paediatric)	Procedures done in an operating theatre per 100,000 population per year disaggregated by adults and Paediatric(0-17yrs)	2019	DHIS 2	Monthly				
	OPD waiting time reduced	OPD Waiting time (Disaggregate by adults and Paediatric)	Time taken by SOA patients from first presentation to diagnosis and treatment plan		Client Satisfaction Survey (CSS)	Quarterly				
	Theatre waiting time reduced	Theatre waiting time (Disaggregate by adults and Paediatric)	Time taken from diagnosis to SOA intervention for elective surgeries							
		Decision Delivery Interval	Time taken from decision to perform C-section to the delivery of the baby	(Target 30 mins for dire emergencies)	Form (at Harare Hospital) to be standardized across all institutions					
		Theatre waiting time (emergencies)	Time taken from decision to operate to cutting time	TBD (currently not available; research from other countries or professional associations; borrow from obs and have categories)	Theatre registers (EHR), and patient notes	Monthly				
	Surgical cancellation rate reduced	Surgical cancellation rate (disaggregated by adults and Paediatric)	Number of cases cancelled divided by number of total scheduled cases	Sample some hospitals incl. Sally Mugabe (go via Dr Pasi)	Matron's report	Monthly				
	Endoscopy and minimal access services provided	Number of hospitals with endoscopy and minimal access surgery	Provincial and central hospitals		Theatre registers					
		Number of endoscopy and minimal access surgeries conducted (disaggregated by hospital)	Provincial and central hospitals	*ask Dr Dhege	Theatre registers (adjust dashboard to include this indicator)					

Outcome	Output	KPI	KPI definition	Baseline value (year)	Data source	Frequency	2022	2023	2024	2025
	Surgical site infections reduced	Surgical site infection rate (disaggregated by Adults and Paediatric)	# of infection associated with surgical operation within thirty days of an operation or 1 year if an implant has been introduced over the total number of surgical operations done multiplied by 100,000 population	Not tracked by all firms	Need to standardize tool and track	Monthly				
	Citizens protected against catastrophic expenditure	Incidence of catastrophic expenditure from out of pocket payments for SOA	Number of households that received SOA services that used more than 25% of their monthly income over total number of households that received SOA services per 100,000 population.	(to confirm 25% using our NHA)	NHA	Every 2 years				
	SOA supplies provided	Proportion of hospitals with adequate SOA supplies (disaggregated by district, provincial and central)	Number of hospitals with adequate SOA supplies (based on tracer list) divided by total number of hospitals Essential medicines							
		Proportion of hospitals with adequate SOA supplies (disaggregated by district, provincial and central)	sundries							
	Provinces capacitated to store blood on site	Proportion of provincial hospitals with capacity to store sufficient blood for the province on site	Number of hospitals with capacity store blood on site (define) divided by total number of hospitals							
	Bellweather procedures performed	Proportion of district hospitals performing Bellweather procedures		2019	Theatre registers	Quarterly				
	SOA research conducted	Number of SOA-related operational research articles published in peer-reviewed journals	One article per year for each area		SOA TWG, MRCZ	Annual				
	Oversight activities conducted	Number of SSV conducted	Including mentorship and hand holding							

Outcome	Output	KPI	KPI definition	Baseline value (year)	Data source	Frequency	2022	2023	2024	2025
	Framework for private sector reporting established	Proportion of private sector health facilities reporting SOA indicators in HMIS	Private hospitals with theatres							
	Clinical audits conducted	Proportion of hospitals conducting SOA clinical audits routinely	Mission, district, provincial and central hospitals							
	SOA TWG established	Number of SOA TWGs meetings conducted	National TWG with participation of stakeholders at all levels including sentinel		Meeting minutes					
	PC teams established	Number of hospitals with functional PC teams	Teams holding meetings, using the PC register and providing services		PC register, meeting minutes	Monthly				
	PC integrated	Number of patients receiving PC in hospitals	Number of patients receiving at least 2 palliative care components		PC register	Monthly				
	Functional theatres available	Number of district hospitals with functional theatres	Functional is defined as having piped oxygen supplies, working anaesthetic machine, working theatre table, working theatre lights, instruments, pulse oximetry (HPA standard)	HPA has full definition						
	SOA workforce density increased	Surgical workforce density	Specialist surgical, anaesthetic, and obstetric physicians who are working per 100 000 population (disaggregated by province)							
	Psychosocial support system established	Proportion of hospitals with psychosocial support programmes for workforce in place	Debrief policy and register of people (de-identified) of those who have received services							
	Efficient oxygen supply systems established	Proportion of district hospitals with efficient oxygen supplies	Availability of uninterrupted oxygen supply in theatre and CCU (target 100%)	*						
	ICU ambulance procured	Number of districts with at least one functional ICU ambulance								

Outcome	Output	KPI	KPI definition	Baseline value (year)	Data source	Frequency	2022	2023	2024	2025
	HDU wards established	Number of district hospitals with functional HDU beds	At least 2 beds							
	Paediatric theatres established	Number of central hospitals with functional paediatric theatres	Excluding Ingutsheni	2 (2022)						
	Perioperative mortality reduced	Perioperative mortality rate	All-cause death rate at 30 days or at time of discharge (whichever comes first) in patients who have undergone a procedure in an operating theatre, divided by the total number of procedures, presented as a percentage							
	Theatre Waiting List Reduced	Number of patients on theatre waiting list (disaggregated by adults and paededs)								
		Proportion of health facilities with age appropriate SOA equipment								

6.2 Implementation Plan Template for the NSOAP 2022-2025

Ref No	Strategic Direction	Illustrative Interventions	Activities	Year			
				2022	2023	2024	2025
Service Delivery							
3.1.1	Address gaps in access, quality and improve SOA service availability and service readiness	Build capacity for district hospitals to carry out the SOA services in compliance with the provisions within the District Core Health Services	Scaling up outreach services and mentorship programs Develop a relevant core SOA service package Develop standardized operating procedures for SOA services at the district hospitals				
		Build capacity for Provincial hospitals to carry out SOA services	Recognition of post basic nursing training and appropriate placement Scale up Support systems for specialist SOA services including outreach, mentorship and research Develop a relevant core service package Develop standardized operating procedures for SOA services at the provincial hospitals Decentralize internship training and revise its outputs				
		Build Capacity for Central hospitals to carry out SOA services	Develop a relevant core SOA service package Reinforce existing SOA services Develop and Implement a SOA sub-specialization plan Develop standardized operating procedures for SOA services at the central hospitals				
		Strengthen paediatric SOA services	Capacitate all provincial and central hospitals to provide paediatric SOA and critical care services Train and retain personnel who provide paediatric SOA services in all provinces Develop standardized operating procedures for paediatric SOA services at all levels				
		Strengthen Palliative Care Integration	Integrate palliative care into pre and in service training curricula for health care workers Train and retain Palliative Care specialists Establish Palliative Care teams at all hospitals Strengthen integration of existing palliative care programs and personnel into SOA services				
		Strengthen the referral policy to ensure patients receive timely care at the nearest equipped health facility	Review the referral policy Prioritize procurement of fully kitted ambulances fit for the terrain Establish a national ambulance system				
Health Workforce							
	Address numerical adequacy gaps of SOA service providers	Ensure availability and equitable distribution of trained and qualified SOA providers at all levels	Expand establishments to meet an ideal SOA provider density Conduct staff audit to identify the available human resources Establish a skills map for tracking geographic distribution Redistribute human resources to needy areas. Implement monetary and non-monetary incentives that are attractive enough for the personnel to move to areas in need in consultation with all stakeholders				
		Train SOA providers and ensure maintenance of the quality standards of education and practice	Increase capacity for SOA training Fund external training where there is no local capacity to train a given SOA service provider				

Ref No	Strategic Direction	Illustrative Interventions	Activities	Year			
				2022	2023	2024	2025
		Ensure all SOA providers are updated in terms of their medical knowledge and skills required to provide safe care	Review regular curriculum and engage the universities and professional societies to design, update and fast track training of SOA providers Review, establish and link HR register to the Health Professions & regulatory bodies to enable real-time retrieval of HR availability in public and private spaces				
	Improve conditions of service, bonding and retention mechanisms	Implement mechanisms to ensure SOA providers with specialized skills are placed in appropriate salary scales	Bench mark salary levels to regional levels Increase post basic allowances to incentivize SOA training				
		Revise the Locum arrangements	Increase locum allowances				
		Develop and implement policies that require mandatory minimum service provision to public hospitals by private practitioners	Review the private practice policy – public/private partnerships				
	Expand the establishment to provide positions that will meet the demand for SOA services	Revise establishment for hospitals to enable attainment of ideal SOA provider densities	Establish additional posts in line with population ratios Unfreeze posts, recruit and place relevant SOA personnel in the appropriate positions at all levels				
	Improve SOA service providers welfare and development	Review remuneration of SOA providers	Advocating for improvement in conditions of service to be in line with regional standards (SADC) for SOA staff				
		Incentive relocations for specialists	Provide accommodation and transport for SOA providers in hard to reach locations as incentives for motivation				
		Ensure availability and equitable distribution of trained and qualified SOA providers at all levels	Redistribute human resources to needy areas				
		Provide and support leadership and career advancement training to improve interpersonal relationships and personal growth amongst health care workers.	Develop policies for subsidised or exemption of HCW and their families from paying user fees at public hospitals Decentralize SOA training to limit family separation Provide psychosocial support services including counselling and “caring for the carer” programs for health care workers and their families				
Infrastructure, Equipment and Products							
	Provide sustainable and appropriate infrastructure and equipment needed for the delivery of safe surgery, obstetrics, and anaesthesia at all levels of the health care system	Renovate, upgrade existing and establish new health infrastructure (theatres, ICU/ HDUs, PACUs and designated surgical wards) to serve the population and ensure equitable and timely access to SOA services	Conduct needs assessments for SOA services (infrastructure, equipment, medical and surgical supplies)				
			Develop standards and guidelines for theatre infrastructure and equipment at different levels of care (oxygen reticulation and wall suction)				
			Renovate and upgrade existing health facilities				
			Develop new health infrastructure for quinary SOA care services				

Ref No	Strategic Direction	Illustrative Interventions	Activities	Year			
				2022	2023	2024	2025
			Involve end users in the planning/designing of the new structures and structures to be renovated				
			Establish paediatric theatres surgical and critical care units				
		Procure, and equip ambulances and strengthen referral management for SOA services	Procure at least 2 ambulances for each district and province (ICU ambulance & 1 with basic equipment)				
			Procure service vehicles for district and provincial hospitals				
			Training of ambulance crews in transporting patients				
			Establish a national EMT training programme				
			Embrace emerging technology e.g the use of drones to augment EMT services				
		Introduce and strengthen the provision of endoscopy and Minimal Access Surgery	Define a standard list of equipment required for each level to be used in endoscopy and minimal access surgery				
			Procure equipment for endoscopy and Minimal access surgery				
		Procure age appropriate SOA equipment.	Evaluate donated equipment for usability before acceptance and distribution				
			Involve end users in procurement of essential equipment Develop and Implement the Health Technology policy Procure appropriate equipment for pediatric surgical procedures				
		Procure, rehabilitate and maintain SOA equipment and infrastructure	Regular training of technicians on equipment maintenance to strengthen equipment maintenance service				
			Establish service level and maintenance agreement with the suppliers to conduct preventive maintenance of equipment for SOA services				
			Ensure end-users are regularly trained on use and maintenance of essential equipment				
3.3.2	Ensure availability of quality and affordable supplies for safe SOA services	Ensure adequate stocks of essential medical and surgical supplies including oxygen so as to provide safe and quality SOA services	Develop a comprehensive national oxygen strategy				
			Strengthen systems for procurement and management of essential SOA supplies to ensure consistent access to affordable essential medical and surgical supplies and medicines				
			Define a minimum list of tracer SOA medicines and sundries				
			Promote blood donation programs and ensure adequate supply and storage of blood and blood products.				
		Ensure availability of blood and blood products.	Strengthen the capacity of blood banks at all levels of care				

Ref No	Strategic Direction	Illustrative Interventions	Activities	Year			
				2022	2023	2024	2025
Monitoring, Evaluation and Research							
3.4.1	Systematically collect quality SOA data in a timely manner to provide information for decision making.	Standardize the HMIS data collection tools to include SOA Include the SOA surgical procedures in the EHR Implement the EHR to all levels of the health care system. Use of existing staff in HIS for entering data to speed up the update of the HER Include SOA reports in DHIS2	Develop EHR module on SOA				
			Review or Develop Data collection tools for SOA that disaggregate by Adults and Paeds				
			Roll out EHR to all levels				
			Revise T5 and HS3/5 to include prioritised SOA indicators				
			Printing and Dissemination				
			Disseminate revised T5 and HS3/5 to all facilities				
			Training Clinicians and M&E staff on SOA data management				
		Digitize the SOA service provision	Procure and install computers at point of admission, OPD, theatre recovery wards, ICU and HDU and wards to facilitate entry of patient information				
		Expand internet connectivity at all levels	Create a central e-hub at the MoHCC and provide broad-band wireless internet to all hospitals including the provision of e-health records.				
		Include submission of SOA data as part of licensing and renewal for SOA providers and private health facilities	Stakeholder engagements (private sector) to revise the data collection tools.				
			Simplify data collection tools based on the prioritized data points				
			Revise existing licence renewal policy to allow for mandatory reporting of Health Data including SOA data				
3.4.2	Ensure SOA programme data	Conduct Oversight Activities	a. Sport Checks b. On site data Verifications c. Support and Supervision Handholding				
3.4.3	Ensure ease of access to SOA scientific data for timely decision making	Evaluations SOA operational research (rapid assessments and surveys)	Conduct SOA, Process evaluation, Mid-term, End-term and Impact evaluations Conduct SOA rapid assessments				
Health Care Financing							
	Improve funding levels and establish budget lines and systems for resource tracking for SOA services so as to achieve Universal Health Coverage.	Establish cost of SOA services to determine the funding levels required for SOA care services	Conduct a costing exercise of all SOA services				

Ref No	Strategic Direction	Illustrative Interventions	Activities	Year			
				2022	2023	2024	2025
		Improve funding for SOA services and strengthen resource mobilization from insurance providers	Define SOA Packages at all levels for the Essential Health Benefit				
			Develop a SOA Investment Case that links to the National Health IC and is based on the Essential SOA Package				
			Increase the allocation of funding on budget lines for SOA activities at district level hospitals				
			Review the user fees exemption policies to ensure all with ability to pay are made to pay e.g. clients covered by medical insurance including under 5, over 65, maternity patients and victims of RTA Implement a real-time validation of membership remittances system				
			Ensure that the hospitals are reimbursed by the central government for SOA services rendered to exempted groups				
		Implement measure to reduce wastage of resources	Establish function risk and loss control units at every hospital				
		Efficient use of available resources.	Capacitate Procurement Management Unit to be able to procure goods and services in a cost effective manner				
			Review and expedite implementation of the National Health Insurance (NHI) Roadmap				
Leadership and governance							
	Strengthen and implement policies and strategies to improve accountability in SOA services at all levels	Strengthen the policy, strategies and guidelines for SOA services and enforce their implementation	Ensure implementation matrices are aligned with the IRBM				
			Conduct clinical Audits and implement recommendations				
			Develop and implement SOA guidelines at all levels				
		Implement a leadership and management capacity development plan for all levels	Conduct SOA training mentorship programmers to improve leadership and governance capacity				
			Decentralize and deliver supportive supervision of SOA providers				
		Establish and Support SOA Coordination framework at all levels (organogram)	Appoint National, Central, Provincial and District SOA coordinators				
			Establish TWGs at all levels				
			Strengthen stakeholder engagement for SOA services				
			Mainstream/integrate SOA services in existing public health programs eg ATM, RMNCAH				
		Ensure integration of palliative care in all SOA services and other health policies	Develop integrated Palliative and SOA guidelines				
	Promote research and evidence generation for effective SOA program development and policy	Establish the burden of Non-communicable Diseases (NCDs).	Conduct the NCDs Stepwise Survey to generate plausible evidence of the growing burden of NCDs as a matter of urgency				
			Set up a fund for operational research into SOA				



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8 National Surgical Obstetric and Anaesthesia M&E Plan

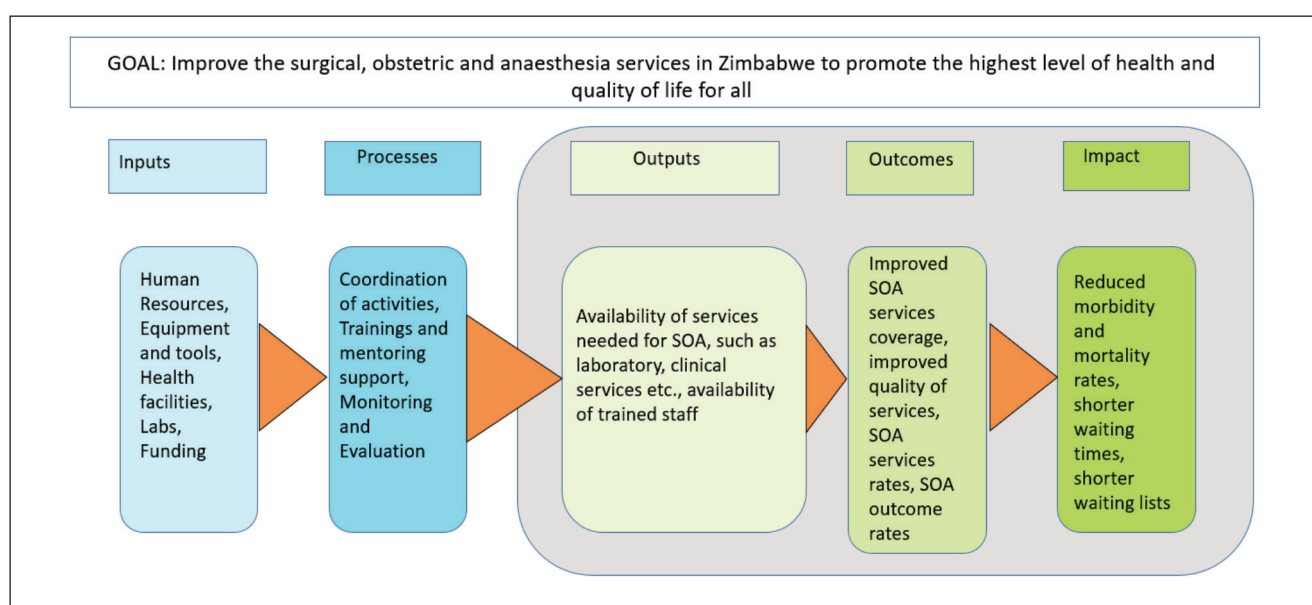
a. Introduction of the Monitoring and evaluation Plan

The Health Sector Monitoring and Evaluation Plan 2021-2025 outlines the principles that guide Monitoring and Evaluation (M&E) in the Health Sector. The SOA M&E Plan is informed by the health sector monitoring and evaluation plan. This Plan seeks to establish a monitoring and evaluation system for Surgical, Obstetric and Anaesthesia Services in Zimbabwe.

Goal

The overall goal of the M&E Plan is to provide a framework for regular and systematic tracking and documenting of progress in the implementation of the National SOA Strategy. The plan also seeks to define mechanisms and processes for systematic and structured tracking of progress towards SOA strategy objectives and performance targets.

b. Theory of Change



Assumptions: Improved conditions of service, Availability of foreign currency, Performing economy, improved referral system

c. Data Management

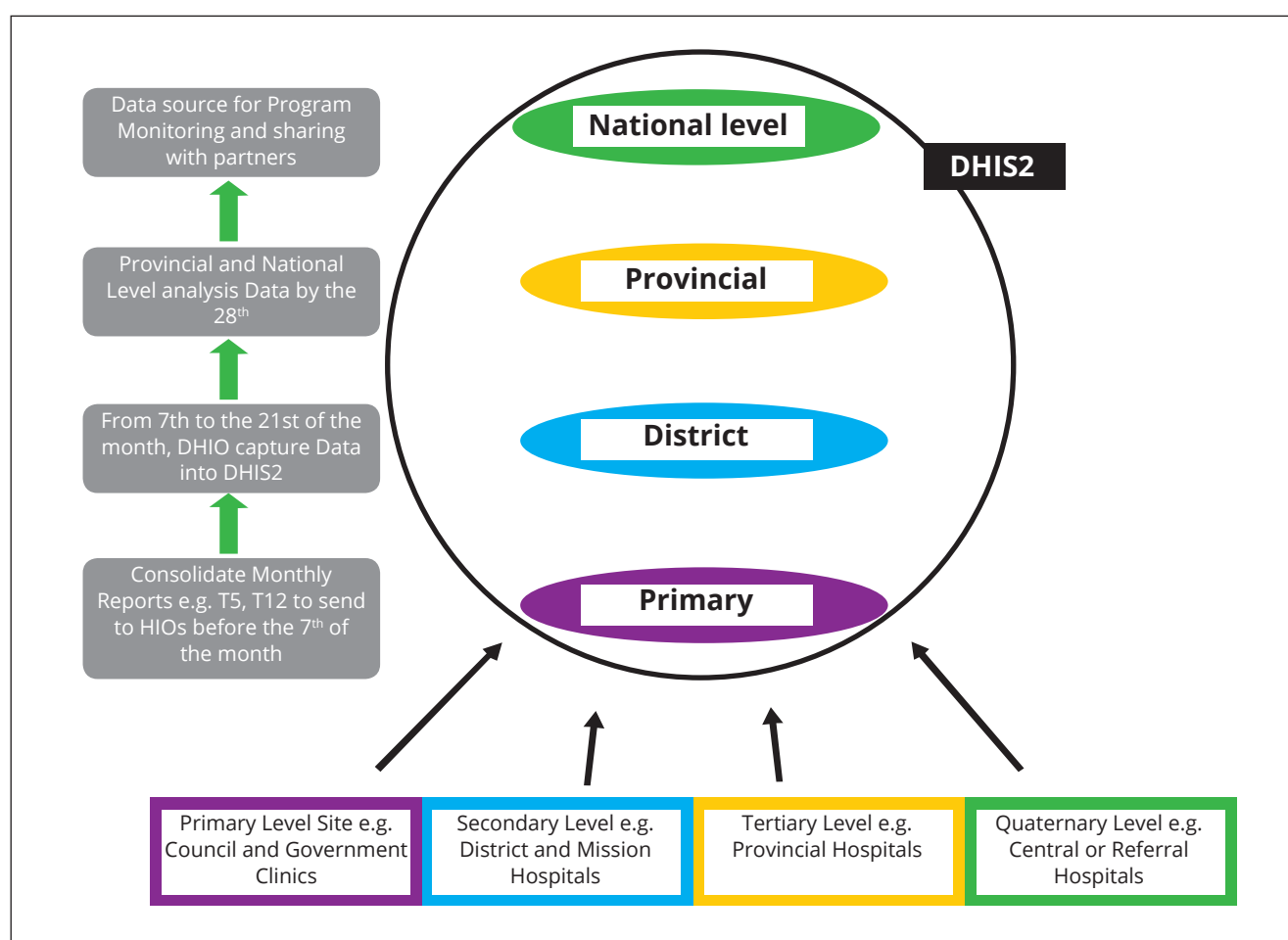
1. Data collection

Standard data collection tools (registers, templates) will be developed in consultation with stakeholders. The developed data collection tools will allow for disaggregated data to be collected and disseminated at all levels of care. The current improvised tools will be incorporated in the tools that are going to be developed. Develop a checklist or AIDs to guide the clinicians to be able

to fill in the SOA data collection tools. Develop a curriculum for training all staff involved in SOA data collection. SOA indicators will be added to DHIS2. The ultimate aim is to have a SOA module in EHR.

2. Reporting

Review the current reporting templates to include SOA data elements. *In consultation with all stakeholders, a list of all priority SOA indicators will be agreed upon for reporting. This list of priority indicators will be reported through the DHIS2 and other Health Information Management systems. The reporting of SOA data will be in line with reporting timeliness in the Ministry. The flow of data is illustrated in the diagram below.*



The primary includes the community contribution

Data Quality - Data quality principles will be adhered to at all levels of data collection. All the data will be validated at the institution of collection before being reported to the next level. Onsite data verification, spot checks and data quality audits will be undertaken routinely and periodically to ensure data meets the minimum standards. SOPs and guidelines will be developed and distributed to all levels to ensure data quality assurance. Key players in SOA will be capacitated in processes that ensure data quality.

3. Data Analysis, Dissemination and Use

A standard data analysis plan will be developed for all levels of the M&E system. The M&E sub-committee will develop a data analysis plan for use at all levels that will serve as a guide on how to analyze and interpret data. Different software will also be used in the analysis of data depending on availability and the purpose of the report. Monthly, quarterly and annual data analysis meetings will be conducted at all levels to produce reports for dissemination. A detailed data dissemination plan will be developed. Feedback sessions will be conducted both physically through meetings, workshops and electronically through web-portals, situation rooms, websites, dashboards and online meeting platforms to stakeholders at all levels. The reports produced will be simplified and will have an action matrix (std. template) annexed to ensure evidence based decisions by the stakeholders.

4. Data Storage

All the SOA data collected manually will be stored in files using an established standard record archiving system at all levels. SOA data collected electronically will be stored electronically in the HMIS servers. Specific databases will also be created in the existing HMIS databases to manage both composite and disaggregated SOA data.

d. NSOAS routine oversight

Oversight activities will be conducted by key players in NSOAS routinely during programme implementation. The oversight activities will include but not limited to support and supervisions, routine monitoring, mentorship, hand holding activities, spot-checks and onsite data verification missions. The frequency of these activities is based on issues, type of mission or other relevant factors. Frequency ranges from weekly, monthly and quarterly or annually. A detailed activity matrix will provide the details with regards to the scope and frequency of these activities.

e. Evaluation, Survey and Research

SOA research agenda will be developed to guide operational research which will generate key information to guide evidence based decision making in programming. The following NSOAS evaluations will be conducted:

- Baseline assessments
- Process evaluations
- Mid-term evaluation
- End of term evaluations
- Impact evaluation

These will be conducted to measure the effectiveness of strategies and interventions. Key rapid assessment and surveys will also be conducted to augment and triangulate data for evidence-based decision making. A database for all the research, surveys and evaluations conducted will be created for future reference. Key players in the SOA processes will be capacitated with research and evaluation skills for them to conduct the processes internally.

f. Operationalization of the M&E Plan

SOA research agenda will be developed to guide operational research which will generate key information to guide evidence based decision making in programming. The following NSOAS evaluations will be conducted:

- The key players in SOA must be capacitated with knowledge and skills development to conduct M&E activities.
- Provision of tools of trade to be able to conduct M&E functions (laptop, data, stationary e.t.c)
- Management at all levels should ensure that focal persons are adequately capacitated to conduct M&E for programmes.
- A dedicated budget of 10% must be allocated for NSOAS M&E.

Performance Framework: National Surgical, Obstetric and Anaesthesia Services 2022-2025

Pillar	KPI	KPI definition	Baseline value (year)	Data source	Frequency	Target	2023	2024	2025
Service Delivery	Surgical volume	Procedures done in an operating theatre per 100,000 population per year (adults 18yrs and above)	TBD	DHIS 2	Monthly	TBD			
		Procedures done in an operating theatre per 100,000 population per year (paediatric 0-17 years)	TBD	DHIS2	Monthly	TBD			
	Surgical cancellation rate	Number of cases cancelled divided by number of total scheduled cases (adults 18yrs and above)	TBD	Matron's report	Monthly	TBD			
		Number of cases cancelled divided by number of total scheduled cases (paediatric 0-17 years)	TBD	Matron's report	Monthly	TBD			
	Perioperative mortality rate	All-cause death rate at 30 days or at time of discharge (whichever comes first) in patients who have undergone a procedure in an operating theatre, divided by the total number of procedures, presented as a percentage	TBD	Patient records	Quarterly	TBD			
	OPD Waiting time	Time taken by SOA patients from first presentation to diagnosis and treatment plan (adults 18yrs and above)	TBD	Client Satisfaction Survey (CSS); patient notes	Quarterly	TBD			
		Time taken by SOA patients from first presentation to diagnosis and treatment plan (paediatric 0-17 years)	TBD	Client Satisfaction Survey (CSS); patient notes	Quarterly	TBD			
	Theatre waiting time	Time taken from diagnosis to SOA intervention for elective surgeries (adults 18yrs and above)	TBD	Patient notes	Monthly	TBD			

Pillar	KPI	KPI definition	Baseline value (year)	Data source	Frequency	Target	2023	2024	2025
		Time taken from diagnosis to SOA intervention for elective surgeries (paediatric 0-17 years)	TBD	Patient notes	Monthly	TBD			
	Decision Delivery Interval	Time taken from decision to perform C-section to the delivery of the baby	TBD	Form in use at Sally Mugabe Hospital to be standardized across all institutions	Monthly	Target 30 mins for dire emergencies			
	Proportion of districts hospitals performing Cesarean Section on pregnant woman who require it			VMAHS	Quarterly		100%	100%	100%
	Proportion of districts with at least 3 doctors			VMAHS	Quarterly		100%	100%	100%
	Proportion of District Hospitals having at least two health professionals who can do C/S			VMAHS	Quarterly		96%	97%	98%
	Proportion of district hospitals with at least two health professionals who can provide anaesthesia for emergency obstetric surgery			VMAHS	Quarterly		95%	96%	97%
	Proportion of district hospitals with the capacity to provide blood transfusion for emergency obstetric care		71% VMAHS (2014)	VMAHS	Quarterly		100%	100%	100%
	Number of patients on theatre waiting list (adults)	Number of surgical patients on theatre waiting list (adults 18yrs and above)	TBD	Theatre waiting list	Monthly	TBD			
		Number of surgical patients on theatre waiting list (paediatric 0-17 years)	TBD	Theatre waiting list	Monthly	TBD			
	Surgical site infection rate	Number of infections associated with surgical operation within thirty days of an operation or 1 year if an implant has been introduced over the total number of surgical operations done multiplied by 100,000 population (adults 18yrs and above)	TBD (Note: not tracked by all firms)	Need to standardize available tool	Monthly	TBD			
		Number of infections associated with surgical operation within thirty days of an operation or 1 year if an implant has been introduced over the total number of surgical operations done multiplied by 100,000 population (paediatric 0-17 years)	TBD (Note: not tracked by all firms)	Need to standardize available tool	Monthly	TBD			

Pillar	KPI	KPI definition	Baseline value (year)	Data source	Frequency	Target	2023	2024	2025
	Number of patients receiving PC in hospitals	Number of patients receiving at least 2 palliative care components	TBD	PC register	Monthly	TBD			
	Proportion of district hospitals performing Bellwether procedures	Number of district hospitals performing Bellwether procedures divided by total number of district hospitals	TBD	Theatre registers	Quarterly	TBD			
Finance	Incidence of catastrophic expenditure from out of pocket payments for SOA	Number of households that received SOA services that used more than 25% of their monthly income over total number of households that received SOA services per 100,000 population.	TBD	National Health Accounts	Every 2 years	TBD			
Infrastructure and supplies	Proportion of hospitals with adequate SOA supplies	Number of district hospitals with adequate SOA supplies (based on tracer list) divided by total number of hospitals. Tracking essential medicines	TBD	Pharmacy records	Monthly	TBD			
		Number of central hospitals with adequate SOA supplies (based on tracer list) divided by total number of hospitals. Tracking sundries	TBD	Pharmacy records	Monthly	TBD			
		Number of provincial hospitals with adequate SOA supplies (based on tracer list) divided by total number of hospitals. Tracking sundries	TBD	Pharmacy records	Monthly	TBD			
	Proportion of health facilities with fully functional communication equipment for emergency referral		90% VMHAS (2014)	VMAHS	Quarterly		97%	98%	100%
Monitoring, Evaluation and Research	Number of SOA-related operational research articles published in peer-reviewed journals	One article per year	TBD	SOA TWG, MRCZ	Annual	3 per annum			
	Number of SSV conducted								
	Proportion of private sector health facilities reporting SOA indicators in HMIS	Number of private hospitals with theatres reporting on SOA divided by total number of private hospitals with theatres	TBD	HMIS	Monthly	100%			
Governance	Number of SOA TWGs meetings conducted	National TWG with participation of stakeholders at all levels including sentinel	0	Meeting minutes	Quarterly				
	Number of hospitals with functional PC teams	Teams holding meetings, using the PC register and providing services	TBD	PC register, meeting minutes	Monthly	TBD			
Workforce	Surgical workforce density	Obstetric specialist who are working per 100 000 population	TBD	HRH records	Quarterly	TBD			
		Anaesthetic specialist who are working per 100 000 population	TBD	HRH records	Quarterly	TBD			
		Surgical specialist who are working per 100 000 population	TBD	HRH records	Quarterly	TBD			

Pillar	KPI	KPI definition	Baseline value (year)	Data source	Frequency	Target	2023	2024	2025
Infrastructure and Supplies	Proportion of district hospitals with efficient oxygen supplies	Number of hospitals with availability of uninterrupted oxygen supply in theatre and CCU divided by total number of hospitals	TBD	Pharmacy, CCU and theatre records	Monthly	100%	100%	100%	100%
	Number of central hospitals with functional paediatric theatres	Excluding Ingutsheni	2 (2022)	Hospital records	Quarterly	TBD	3	4	5



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