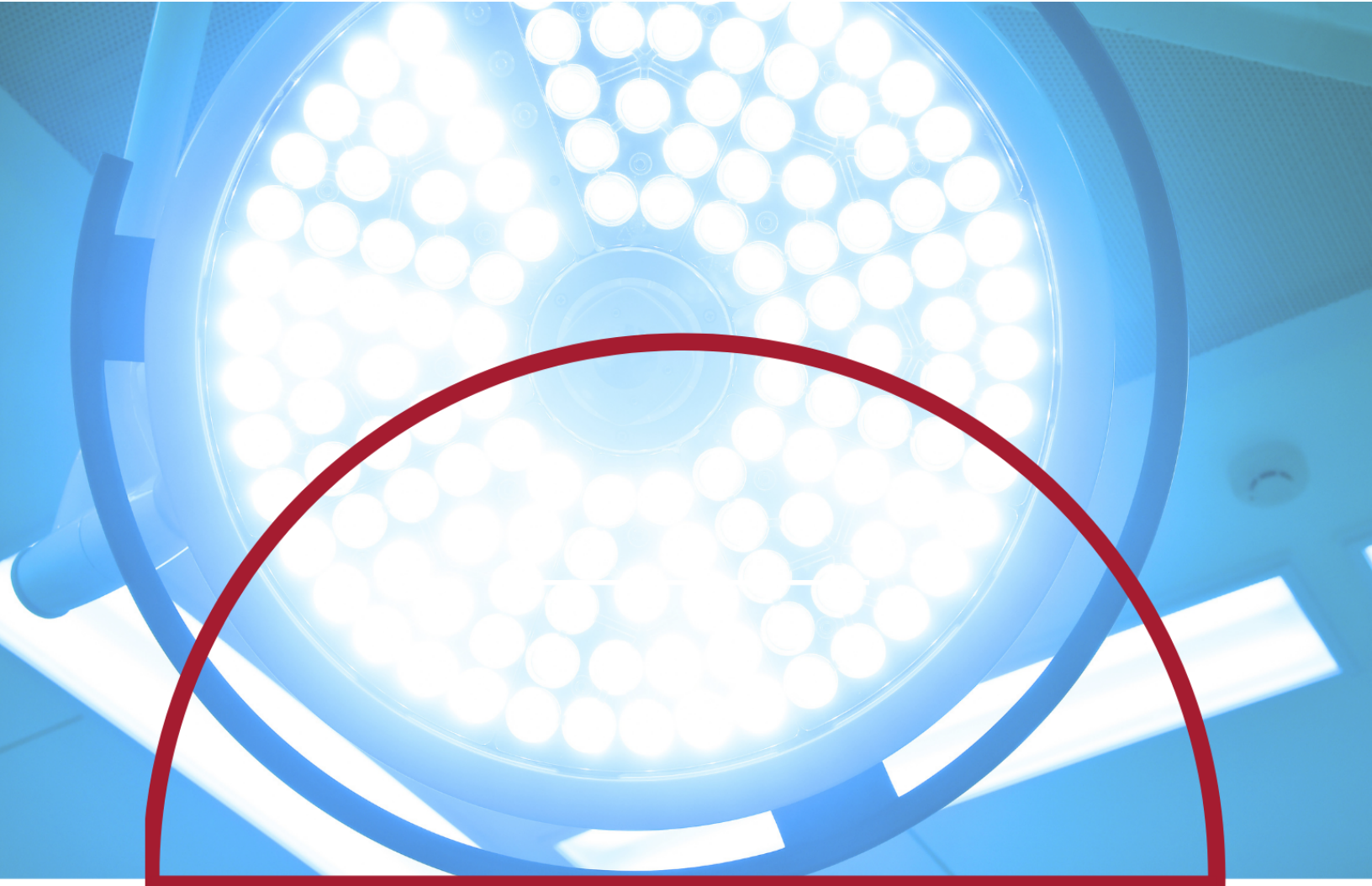

TOWARDS A STRATEGY FOR IMPROVING SURGICAL HEALTHCARE WORLDWIDE

PROGRAM IN GLOBAL SURGERY AND SOCIAL CHANGE
Harvard Medical School

THE GLOBAL SURGERY FOUNDATION

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About the Report

The report, *Towards a Strategy for Improving Surgical Healthcare Worldwide*, was developed under the guidance of Dr Geoff Ibbotson, Executive Director of the Global Surgery Foundation and Senior Health Advisor at the United Nations Institute for Training and Research (UNITAR). The ideas, insights and frameworks in the report are drawn from several discussions convened for the Geneva Health Forum 2020 with distinguished clinicians and leaders in surgery, global health and health systems, combined with earlier research conducted by the Program in Global Surgery and Social Change at Harvard Medical School. The report was published jointly by the Program in Global Surgery and Social Change and Health Systems Innovation Lab at Harvard University and the Global Surgery Foundation.

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Executive Summary

Background

Despite significant progress, the provision of surgical healthcare is sub-optimal for patients in most low-income and middle-income countries (LMICs), and in many high-income countries (HICs), where there are substantial disparities in equity, effectiveness, efficiency and responsiveness of the care provided. This consensus paper outlines a renewed global surgery strategy to expand surgical healthcare in LMICs, given recent trends, research and empiricism in surgical healthcare and global health systems. The findings emanate from a series of structured workshops convened with scholars, leaders and practitioners in global health and surgical healthcare across the public, private and voluntary sectors for the 2020 Geneva Health Forum (GHF). The overall objective of the strategy is to enhance the provision of surgical healthcare that should be delivered with effectiveness, efficiency, and responsiveness as part of Universal Health Coverage (UHC) within country health systems. Three drivers contribute to the current failure to provide adequate surgical healthcare in most LMICs:

1) Surgical healthcare is not adequately prioritised compared to other healthcare silos and programmatic focus areas at the domestic, regional and global levels;
2) Inefficient and insufficient investment to sustainably fund health system functions (governance and organisation, financing and resource management) needed to deliver effective, efficient and responsive surgical health care, and;
3) Weak implementation stemming from suboptimal governance and fragmented organisation of health systems needed to translate funding and existing resources into effective surgical healthcare at primary, secondary and tertiary levels of health service delivery.

We examine these three inter-related drivers in the context of recent developments, trends, empiricism and scholarship in the financing, governance, organisation and resource management of surgical health systems.

Section 1: The global health terrain and the current position of surgical care

Silos refer to the set of people, ideas and resources associated with a specific interest in global health. A silo could be centred around a disease category (e.g. HIV/AIDS), population group (e.g. children), or intervention (e.g. plant-based diets). As a uniquely cross-cutting and system-wide form of healthcare, surgical healthcare has the opportunity to *stitch* silos together and unify their seemingly disparate objectives and integrate activities towards the shared goal of strengthening health systems to achieve UHC. A contemporary example of this integration includes the utilisation of surgical resources (consumables, for example, oxygen, surgical masks, infrastructure including ventilators, amongst others) in the recent COVID-19 pandemic.

Knowing this, the argument for investment, both financial and political, in surgical healthcare needs to be reframed to emphasise how specific results will be achieved by focusing on the surgical component within existing silos. One approach towards this larger vision would be to segment surgical healthcare into different products that may be introduced into silos through *entry points* that bridge global surgery with an established silo by placing the focus on a shared issue of interest and collective benefit. Enacting this vision will depend on the willingness and ability of all actors in the global surgery movement to 1) build and strengthen effective and cohesive coalitions for a common purpose, and; 2) assist governments in the development of the necessary assets to a) enhance policy effectiveness; b) select feasible and high-impact interventions; c) develop successful implementation models, and; d) consistently demonstrate results.

Section 2: Financing and political support for the expansion of surgical healthcare

At the global level, but particularly in LMICs, investment in surgical healthcare is not adequate to meet current or projected healthcare demands. We use the term investment to mean both the financial commitments required to fund health system functions (financing, resource management and governance organisation) and the political support required to secure and manage such financial commitments towards the delivery of effective surgical healthcare for all people within a demarcated geographical boundary or nation-state. National Surgical, Obstetric, and Anaesthesia Plans (NSOAPs), a policy instrument to improve surgical healthcare within a health system, can provide an institutional process for deciding which entry points to prioritise by including stakeholders from different silos. Deciding on specific entry points could help define how surgical

healthcare will contribute to the development of other health system priorities and identify opportunities to more efficiently channel resources for shared benefit.

Five silos with promising entry points for global surgery were identified as relevant in most LMIC contexts: maternal health, child health, injuries, cancer, and global health security. Each of these five silos receive significant and growing funding and have active networks advocating for their importance in terms of improving health system performance, achieving UHC and making progress on the SDGs. For each of these, investment cases must be made to potential funders linking investment in surgical healthcare with their overall goals. These investment cases must establish: 1) the magnitude, urgency, scale and perceptions of the surgical problem, 2) the proposed surgical intervention and how it will address the problem, and 3) the cost of the surgical intervention and expected results over time. Furthermore, it is essential to mobilise and engage citizens and communities to increase the political priority of strengthening surgical systems and ensure that the surgical systems are responsive to their needs.

Section 3: Governance and implementation of surgical systems

The current COVID-19 pandemic has exposed the relative capabilities of nation states to deliver healthcare services during crisis. The capability and effectiveness of national governments and their leadership in producing, distributing and monitoring personal and public healthcare services must be considered when determining strategies to implement and scale up surgical healthcare interventions. Given the crucial role of national governments in coordinating the provision and in providing sustainable financing pathways for surgical healthcare, it is essential to evaluate the country's political terrain to understand the dominant and emerging opportunities and threats that shape the health agenda and why certain entry points and health issues are prioritised and funded. Additionally, engagement with the private and voluntary sectors would help to encourage support, identify areas of mutual benefit, and harness the strengths of existing resources, innovation, and expertise while promoting health equity and the expansion of surgical healthcare within the context of UHC.

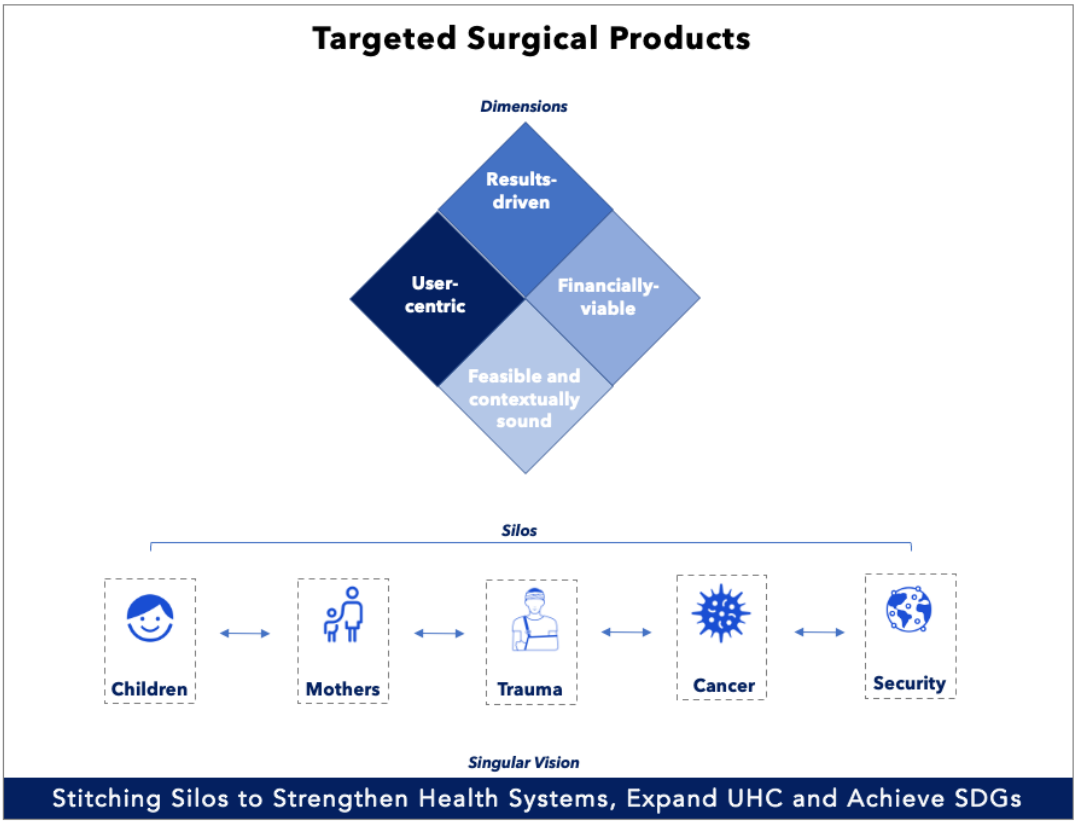
Data systems should be dramatically strengthened in LMICs to enable timely surgical system intelligence and enhanced decision-making by making it easier for countries to report, pool and

analyse surgical systems and pave the way for forecasting, benchmarking, and continual improvement.

Defining targets and metrics to measure progress

The purpose of the global surgery movement is to ensure the worldwide provision of quality and affordable surgical healthcare to all that need it. In order to achieve this larger purpose, the global surgery movement will need to pursue a collective strategy that achieves five aspirations: 1) elevate political priority, 2) expand financing, 3) establish stronger coordinating and implementing institutions, 4) build coherent coalitions within and outside of surgical healthcare, and 5) introduce a range of interventions at the facility level and use data systems to replicate and scale-up more effectively. The first step of this strategy is to identify suitable approaches and establish feasible targets to meet these aspirations and achieve its common purpose.

Accelerate targeted investments in surgical healthcare to expand access to all through UHC



Source: Authors

Introduction

The Geneva Health Forum (GHF) is a biannual gathering, first launched in 2006 by the hospitals of the University of Geneva. The GHF aims to promote the dissemination of innovative practices in global health and foster collaboration between the various sectors involved in healthcare, and the development of novel methods, processes, and technologies for impact. In previous years, the overall thematic focus of the GHF has covered the areas of access, globalisation, health system strengthening, workforce, and digital technologies. The 2020 Geneva Health Forum focused on improving access to healthcare with an emphasis on pragmatic programs that are implementable, given the specificities of various political, social, and economic contexts. The GHF is broadly representative, involving over 1600 participants from 80 countries, representing public, private, and voluntary sectors.

This report outlines a renewed strategy to optimise the level of investment, degree of priority, and extent of contextually relevant implementation to scale-up surgical healthcare in LMICs. Our findings and analysis are the product of a series of three workshops (Table 1) convened for the 2020 GHF, each with a different theme and predetermined discussion questions. Workshop participants included experts in global public health, government, private sector, academia, and volunteer organisations, in addition to frontline providers from low-income and-middle-income countries (LMIC) and high-income countries (HIC). The proposed strategy was developed through the discussions held in each of these workshops and integrates the unique viewpoints presented by all of the participants.

The original title of the series was “Disrupting silos to scale-up surgical care for Universal Health Coverage (UHC) globally”. During the first workshop, the participants emphasised the cross-cutting nature of surgical healthcare and the potential to integrate silos, which we define as the set of people, ideas and resources associated with a specific interest in global health. A silo could be centred around a disease category (e.g. HIV/AIDS), population (e.g. maternal care), intervention (e.g. plant-based diets) or any other limited category that is widely accepted as a separate entity. Rather than disrupt them, surgical healthcare provides the opportunity for shared progress across silos in health systems strengthening, UHC achievement and sustainable development (Figure 1). This is because surgical healthcare encompasses a broad range of healthcare goods and services required throughout a person’s lifespan.[1] Surgical healthcare requires a functioning health system at primary, secondary and tertiary levels, and a functioning health system requires that surgical healthcare is delivered to meet population health needs at all levels.[1,2] Optimising surgical healthcare provides a distinct approach to strengthen the functions (governance and organisation, financing and resource management) and meet the service delivery objectives (efficiency, effectiveness, equity and responsiveness) of health systems. Further, the surgical ecosystem—the human resources, infrastructure and supply chains needed to deliver surgical healthcare—impacts several global health silos[3], for instance, maternal and children’s healthcare or injuries, and therefore has the capability to connect and strengthen vertical health programs and achieve collective results. The descriptor of surgery as an "integrator" emerged from the first workshop, and it was subsequently decided to change the theme of the series to reflect surgery as a unifying force in health systems, emphasising its ability to integrate and connect silos rather than disrupt them.

We organise this report in three sections: (1) The global health terrain and the current position of surgical healthcare, (2) financing and political support for surgical healthcare, and (3) governance and implementation of surgical systems. Section one discusses the position of surgical care amidst the various silos that comprise global health and how to better align surgical healthcare within silos and national health priorities by optimising how it is framed and perceived. In section two, we turn our attention to investing in surgical healthcare by identifying feasible entry points, developing stronger investment cases and adapting current policy approaches to strengthen surgical healthcare given existing health system financing constraints and political considerations. Section three focuses on governance and implementation; specifically, we discuss the role of government, civil society and the private sector, emphasising the importance of coordinated coalitions for sustained impact and mobilising an inclusive and robust support base. Finally, we provide a summary of pragmatic, flexible and interpretive goals, together with accompanying steps, to help leaders and practitioners within the surgical and global health field enact this strategy.

Surgical healthcare is essential to achieve Universal Health Coverage

The epidemiological and demographic transitions towards ageing populations, non-communicable diseases and multimorbidity[4] have increased the need for surgical healthcare.[5] The provision of surgical healthcare is a foundation of treatment needed to manage approximately one-third of the global burden of disease adequately.[6] However, most people do not have access to safe and affordable surgical healthcare when they need it,[5] a burden that disproportionately affects people living in LMICs (Figure 2).[1] The consequences of this global health system failure have been well-described and affect sustainable development in terms of welfare, human rights, social capital, and

the economy.[1,7–10] Country efforts to expand UHC will not deliver responsive and equitable health care to their populations if surgical healthcare is not provided adequately.

Three drivers contribute to the current failure of health systems to provide adequate surgical healthcare in most LMICs: 1) surgical healthcare is not adequately prioritised compared to other healthcare silos and programmatic focus areas at the domestic, regional and global levels[11]; 2) inefficient investment to sustainably fund health system functions needed to deliver effective and responsive surgical health care[12,13] and 3) weak implementation stemming from suboptimal governance and fragmented organisation of health systems needed to translate funding and existing resources into quality surgical healthcare at all levels of health service delivery.[1,14] We examine these three inter-related drivers in the context of recent developments, trends, and scholarship in the financing, governance, organisation and resource management of global health systems.

Section 1: The global health terrain and the current position of surgical care

What are silos?

Healthcare is planned, financed, and delivered through disease (e.g. HIV/AIDS, non-communicable diseases) or population-specific (e.g. maternal, child health) programs. This compartmentalisation of healthcare produces silos of associated people, ideas, interests, and resources. Silos are established groupings that represent the dominant values and interests in global health. In part, these silos are a product of the legitimate, deliberate, and institutionalised policy planning processes occurring at the country level. Indeed, even at the global level, multilateral, bilateral, philanthropic and foundations maintain this institutional organisation, often in terms of disease-specific silos. They also, though, reflect the interests of funders and dominant actors in the global health system and the political histories and experiences of health system development in countries. Silos are attractive to donors and political leaders as they make it easier to mobilise people and resources around particular issues and are linked to more easily definable measures of success to achieve outcomes. As a result, silos manifest in the form of both global health priorities (e.g. HIV/AIDS) and national health programs (e.g. cancer screening).

The presence of silos in global health presents an inherent challenge to improving surgical healthcare since it is a function of health systems and does not fit neatly into a single silo. On the contrary, surgery is a cross-cutting healthcare intervention that spans many disease groups, affects people throughout their life course, and involves all functional domains or 'building blocks' of a health system.

Using surgical healthcare to integrate silos and strengthen health systems

It is imperative to emphasise the value of the surgical ecosystem in bringing together diverse resources and expertise to allow surgical healthcare to be performed smoothly and safely. The ecosystem can be a basic one, allowing for simple, uncomplicated procedures like abscess drainage and suturing of lacerations or be increasingly complex in accordance with the need for complex procedures like neurovascular surgery and transplants. The spectrum of complexity of surgical healthcare interventions can be designed to meet the corresponding needs at primary, secondary and tertiary levels. It is through this management of multiple types of surgical diseases in relation to modern shifts in the epidemiological landscape, including multimorbidity, that surgical healthcare can integrate silos. For example, developing the infrastructure and resources needed to perform caesarean sections, essential for maternal health, in turn, develops the capability of the same facility to perform emergent damage-control laparotomies, a critical intervention needed to improve trauma and emergency care. Focusing on the surgical management of these silos provides the opportunity for actors in these two areas to work together and combine resources that address both of their priorities.

The smooth functioning of a surgical ecosystem confers the capacity to manage a wide variety of broader healthcare interventions at the 'host' facility that goes beyond the surgical domain. A current example includes the presence of personal protective equipment, ventilators and anaesthesiologists—all essential elements of the surgical ecosystem—that are fundamental to managing the COVID-19 pandemic.[15] In the early stages of the pandemic, operating rooms were being repurposed for the management of critically-ill COVID-19 patients requiring Intensive Care Unit (ICU) management.[15] The surgical infrastructure, workforce, supply chain management and

governance structure within a surgical ecosystem that allow for the delivery of surgical healthcare represent a microcosm of the functionality required at a health system level.

Reframing the need for enhanced surgical healthcare

Champions of the global surgery movement need to reframe surgical healthcare to emphasise its integrating role between silos and its potential to strengthen entire health systems. The overarching goal of this reframing of surgical healthcare is to encourage sustainable investment in terms of both funding and political support to provide the coordinated leadership needed for implementation. By strengthening health systems and contributing to shared outcomes across silos, interventions to improve surgical healthcare offer a unique opportunity to help countries progress towards UHC[16] and attain Sustainable Development Goal (SDG)[17] targets for SDG Goal 3. To achieve this goal, the entire global surgery movement—the web of individuals and institutions with a shared concern for promoting safe, affordable and quality surgical health care worldwide—should position itself as one that supports a range of financially viable, results-driven, feasible surgical interventions, centred around the patient throughout the life course (Figure 3). Such a framing will require demonstrating to governments and other relevant actors that investment in surgical healthcare is imperative for patient-centred care. The investment case for surgery should outline how specific results will be achieved by focusing on the surgical component within existing silos to impact overall health system performance and consequently support the SDG targets.

Panel 1: Definitions

Surgical healthcare: includes the provision of operative, perioperative and non-operative management. Such healthcare services, as elaborated upon in the Lancet Commission on Global

Surgery, require the coordination of multiple resources within the context of a national health system. These resources include, among others, healthcare workers and staff (e.g., surgeons, anaesthesiologists, nurses, laboratory staff), infrastructure (e.g., equipped hospitals with blood banks, Intensive Care Units, diagnostic equipment and laboratory services), consumables (e.g., sutures and medicines), knowledge generation (e.g., training and research institutions), and systems (e.g., data systems and supply chain management).

Health systems: all organisations, institutions and resources that produce actions whose primary purpose is to improve health at a national or sub-national level.[18]

Silo: the set of people, ideas and resources associated with a specific interest in global health. A silo could be centred around a disease category (e.g. HIV/AIDS), population (e.g. maternal care), intervention (e.g. plant-based diets), or any other category that is widely accepted as a separate entity.

Entry point: possible "points of interest" that bridge global surgery with an established "silo" by placing the focus on a shared issue of interest or potential benefit through collaboration (e.g. access to safe c-sections provides an "entry point" to the silo "maternal health").

Product: the packaging of surgical system elements needed to address an entry point (e.g. access to an operating room and surgical instruments for a safe c-section).

One approach toward this larger vision would be to segment surgical healthcare into different *products* that may be introduced into silos through *entry points.* As an example, surgery could be integrated within an existing maternal health program at a national level and positioned as a vital intervention to address maternal haemorrhage, obstructed labour, and many other obstetric complications through a package that provides safe caesarean sections at the District Hospital facility. The surgical management of specific cancers, ranging from diagnostic biopsy, surgical excision procedures to palliative surgery, may also provide entry points to the much larger NCD silo. It would be advantageous to find other entry points to work within established silos and to both support their individual goals and find ways to bridge these goals and thereby create shared value by strengthening health systems as a whole. Demonstrating how the package leads to improved health outcomes (e.g. maternal health or cancer health indicators), as well as how it impacts health and non-health SDG targets (e.g. poverty alleviation, inequalities in particular) would provide a strong investment case for surgical healthcare, within broader health system financing commitments and political considerations.

The high-level arguments developed for surgical healthcare need to support the overall reframing. Global surgery currently relies on a variety of economic, welfare, and ethical arguments to persuade stakeholders, who are organised into silos and coalitions, but these arguments are often presented in a manner that does not support a consistent framing approach (as global health stakeholders often perceive global surgery interests as fragmented, various and not well defined) or one that is not easy for decision-makers in public and private sectors to understand and align their interests. The broad scope of arguments used without adapting to how specific programs produce impact often results in confusion amongst key funding and implementing stakeholders.

While tempting to advocate for a specific agenda within discrete surgical disciplines, the global surgery movement must work together to achieve collective goals. Within the positioning approach described above, strategically defined arguments targeted to appeal to specific silo stakeholders are required to effectively align these groups within the collective goals of the global surgery movement.

Strategies to sustainably integrate surgical healthcare into National Health Systems

Developing the capabilities to enact this vision will take time and concerted effort. It will depend on the ability to 1) build and strengthen effective and cohesive coalitions for shared value creation, and 2) develop the necessary assets to a) enhance policy effectiveness; b) select feasible and high-impact interventions; c) develop successful implementation models, and; d) consistently demonstrate results.

1. Building effective and cohesive coalitions for generating shared value

   Surgical healthcare is composed of numerous specialities, and hence separate sub-interest groups have advocated for improved surgical healthcare within their context and expertise. These groups have developed organically, as a result of sub-specialisation, regional experience, technical focus or function, producing highly organised and coherent organisational structures with specific programs that aim to improve surgical healthcare through a combination of activities in research, policy, funding, advocacy, innovation and capacity-building. The global surgery movement has the advantage of leveraging these groups and the established institutional platform by broadening the coalition to include other relevant stakeholders beyond the surgical field that are globally representative and

sharpen the common purpose and vision. It is essential to allow space for various interest groups to continue their contributions and activities in their focus areas, but also to identify cross-cutting activities that will enable them to advance the common interest of the global surgery movement. The value ethos must be based upon achieving this collective vision—safe, timely and affordable surgical healthcare for all to help attain UHC—and centred on the principles of inclusion, sharing, equality of partners, and above all: a collective spirit.

2. Developing the assets and capabilities

Asset 1: Enhancing policy effectiveness and management at facility level

With an increasing momentum to implement UHC,[16] governments require evidence-based guidelines on how to deliver efficient, effective and responsive surgical healthcare as part of their national healthcare packages. Guidance from the global surgery network to Ministries of Health should come in the form of relevant knowledge, skills, and tools (for example, pooled data registries) to support informed decisions needed to design and implement an essential surgical healthcare package.[19] At a Ministry of Health level, pertinent decisions relate to health system functions (governance and organisation, financing and resource management) in relation to introducing and scaling-up a surgical healthcare package. Once these policy decisions are made, facility managers similarly need support to make choices that impact delivery and enhance technical efficiency of the prioritised surgical healthcare package, promoting value in terms of health, user satisfaction, and equity at a local level.

Asset 2: Selecting feasible and potentially high-impact interventions

The global surgery network should develop a coordinated strategy to pilot specific activities that improve surgical healthcare within targeted entry points. This might include designing and implementing a program to enable district hospitals to deliver quality caesarean sections within the maternal health context, management of open fractures as a component of emergency care systems, surgical capacity-building for comprehensive cervical cancer care or airway management and ventilation in the context of COVID-19. Such demonstration projects could help build the evidence base, data, and technical know-how of feasible interventions to supply policymakers with the knowledge, tools, and practice models needed to develop and implement the most high-impact surgical healthcare packages relevant to their context. These interventions will need to be systematically evaluated to demonstrate how they will improve health systems, health outcomes and impact SDG attainment. Implementers could leverage regional agreements (for instance the Southern African Development Community, Decisions I and XXI of 2018 and 2019 respectively)[20] to expand the fiscal space needed to introduce interventions and evaluate and scale up those that demonstrate success. This would help develop a menu of solutions and innovations aligned to specific surgical problems that policymakers could use to inform their decisions and build adequate support to fund the design, introduction and scale-up of targeted surgical solutions for large-scale impact.

Asset 3: Developing successful implementation and care delivery models

Health systems approaches are needed to design, implement, and scale up surgical healthcare interventions for impact. The delivery of surgical healthcare is a complex process[21] that requires substantial changes to health system functions, for instance, resource management, governance,

and financing, which includes, among others, payment reform and achieving the right balance of regulation between providers and funders to enhance equity, effectiveness and responsiveness of surgical healthcare. Introducing new policies, processes, cadres and devices that aim to improve surgical healthcare often produce unexpected changes in health systems, for example, in the institutional logic[22] or supply-side factors such as patient behaviour, which can lead to resistance and non-linear or unexpected results.[23] Further, successful implementation in one setting does not guarantee success in another context, though processes can be optimised, and results achieved if based on approaches that draw from the lessons learned in different contexts. Metrics, potentially based on the six core surgical indicators identified by the Lancet Commission on Global Surgery[1] used in national situational assessments[24,25] could be further developed and validated to compare surgical system performance and enable benchmarking and forecasting across countries.

Asset 4: Demonstrating results and open data repository

It is vital to show funders that select surgical interventions will lead to specific results at a given cost. However, articulating results is difficult in most LMICs due to challenges in data collection, pooling, storage, and analytic processes, with limited data availability being a well-known issue in global surgery.[26,27] Standardising processes and providing simple tools for data collection, pooling and analysis could improve the availability of surgical outcomes data. Further, pooling of data at a global level (as the World Development Indicators allow) to create accessible data warehouses (highly structured data) and lakes (raw, unstructured data) could enable in-depth analyses of extensive data that draw from different contexts and the deployment of machine learning to derive novel insights and further guide implementation approaches in different contexts.

Section 2: Financing and political support

Over the coming decades, emerging economies will need to substantially increase surgical volume to meet increased surgical demand. At the global level, but particularly in LMICs, investment in surgical healthcare is not adequate to meet current or projected healthcare needs.[13] We use the term investment to imply both the financial commitments required to fund health system functions (financing, resource management and governance organisation) and the political support required to secure and manage such financial commitments towards the delivery of high-quality surgical healthcare for all people within a demarcated geographical boundary or nation-state.

Identifying entry-points for investment

A systematic assessment should be conducted in a given setting to understand which entry points are promising and feasible for surgical healthcare. NSOAPs provide a systematic and inclusive process for this assessment to take place, which could either occur as part of the financing domain or within an overall NSOAP Financing Strategy.[28] There are often select stakeholders that have substantial interest and influence over the activities and strategy of the health programs concerned. It is essential to identify these stakeholders and understand what arguments might persuade them to support the inclusion of surgical healthcare within the overall framing of global surgery described previously. The feasibility of entry points fluctuates based on changing political interests and commitments, economic drivers and social factors. When building adequate support within a given entry point is challenging, different and more readily accessible entry points should be sought as alternatives.

Five silos with possible entry points for global surgery were identified as particularly significant in most LMIC contexts: maternal health, children's health, injuries, cancer, and global health security. Each of these five silos receive significant and growing funding and have active networks advocating for their importance in terms of improving health system performance, achieving UHC and making progress on the SDGs. These five silos are associated with coherent and organised structures at the global and national levels, which support the work of national governments in designing, introducing and scaling up effective healthcare services to improve health outcomes within their respective entry point. Relevant surgical healthcare stakeholders should establish (within contextual parameters) how the provision of distinct surgical healthcare services could support the objectives through entry points within these silos and harness the global surgery movement to achieve shared impact.

Constructing an investment case to increase priority and attract funding

For any entity (private, public or voluntary) to invest in a plan or intervention to improve surgical care, there should be sufficient evidence to satisfy four inter-related elements:

(1) The magnitude and scale of the surgical problem, together with how the problem is perceived amongst key stakeholders

(2) The proposed surgical intervention and how it will address the problem

(3) The cost of the surgical intervention and anticipated results

(4) The urgency of the problem.

If the link between surgical healthcare and the interests of the funding agency are not well aligned, substantial support is unlikely. The sweet spot of the funder concerned must be identified as funders are governed by strategic plans and influenced by both overt (executive boards and

shareholders) and less obvious interest groups (inner circle of individuals). If a cogent link is not made between the interests of the funder and the proposed surgical intervention, there is a low potential for galvanising support. Since the primary funders of surgical healthcare stem from public sources, it is critical to make the link between surgical healthcare and political and developmental objectives in relation to health, poverty alleviation, inequalities and social cohesion.

Leveraging existing health policy processes to invest in surgical healthcare

National Surgical, Obstetric, and Anaesthesia Plans (NSOAPs) are comprehensive plans that aim to improve surgical healthcare within a health system by making changes to six functional domains of a health system.[29] As a complex health system reform, NSOAP formulation and implementation are time-consuming, costly, and often produce non-linear and uncertain results. For these reasons, it may be difficult for funders to understand the role of NSOAPs, specific problems to be addressed, outcomes to be expected, and interactions with broader considerations such as fiscal constraints and government effectiveness.

One potential strategy to reduce the level of investment risk of NSOAPs is to translate the broad vision and targets of NSOAPs, which emanate from a process of consensus, into simplified *products* (as outlined previously in terms of intervention, healthcare condition, or patient group for example) within specific entry points that are marketed to specific funders within these entry points. Elaborating on the example used previously: an obstetric care package (which could include improving three distinct services— caesarean sections, emergency hysterectomy, and blood transfusion) could be promoted as a standalone intervention with finite costs and projected

outcomes with a visualisation of expected results given different implementation scenarios. The benefit of using the NSOAP methodology is three-fold. First, the NSOAP as a process brings a broad range of stakeholders together to identify and agree upon priorities through consensus, thus producing an inclusive overall vision with targets for surgical healthcare. Second, the NSOAP health systems approach could help to enable the effective design, introduction and scale-up of specific interventions by considering health system behaviour. Health system behaviour and dynamics, a product of multiple factors—political, cultural and technical, among others—is critical to understand as it ultimately determines intervention adoption, diffusion and overall impact.[22,30,31] Finally, the NSOAP approach is flexible and could provide the framework to fully cost products for integration within government National Health Strategic Plans (NHSP) and National Health Accounts. This would enable high priority aspects of an NSOAP to be financed and implemented as part of budgeted NHSPs, which are implemented as part of the work of government on an annual basis.

Political support: the role of citizens and civil society

Patients and civil society have a fundamental role to play in terms of managing and fomenting the attention of their politicians on health matters. Their role is readily appreciated by reflecting on HIV/AIDS policy in South Africa over the past decades. Civil society used anti-apartheid mass mobilisation and political resistance strategies to persuade the government into action and towards the negotiation table.[32] An active citizenry—often organised in the form of civil society organisations—compel government into action. In contrast, passivity around an issue almost always guarantees a low political level of priority for the state.[33] Currently, social mobilisation around the need for surgical healthcare is low, implying that governments are not under pressure

to provide surgical healthcare. It is essential that citizens have a basic understanding of their health rights and entitlements. Within these processes of social enfranchisement and health entitlements through UHC, surgical healthcare does not feature prominently. However, in people's daily experience, many are acutely aware of how challenging it is to access surgical healthcare. Incorporating surgical healthcare within the broader right to health through the UHC narrative could help develop a groundswell of support. The content and form of this support will differ from region to region and should be inspired by the sociocultural sensibilities and historical context of different regions. Engaging citizens (largely passive agents in surgical healthcare currently) through relevant social channels (social media, traditional media, film, song, amongst others) is vital to ensuring that surgical healthcare is responsive to patient needs and expectations.

Section 3: Governance and implementation for surgical healthcare

Government and its indispensable role

Both historical and contemporary political[34] and economic[35] factors influence the health agenda and the degree to which national programs are financed and sustainably implemented. In Africa, for example, the health agenda is often influenced by external entities (former colonial states and bilateral funding agencies, including multilateral entities). In other contexts, such as Latin America, internal actors (private sector and civil society) may influence the government to a larger degree.[36] In all cases, the political terrain should be evaluated to understand the dominant forces that shape the health agenda and determine why certain entry points and health issues are prioritised and funded over others.

Regardless of a government's de facto autonomy in defining its health agenda, it has the de jure authority to govern and organise the country's health system. This might include coordinating the various entities that constitute a national health system to ensure that each actor is accountable and producing services that contribute to improved health system performance. Governments can also institute specific regulatory frameworks and establish independent institutions to coordinate the system. In France, for example, the state acts as the chief regulator over a national health system characterised by its plurality of public, private and voluntary payors and providers.[37] Finally, the extent to which a government can effectively deliver national health programs depends also on the degree of state capability and the capacity of its institutions to produce, distribute and monitor public health and personal healthcare services, including accountability about public resource management. The current COVID-19 pandemic has exposed the relative capabilities of nation states to deliver healthcare services during crisis.[38,39] In delivering surgical healthcare services,

many countries have suboptimal state capability and government effectiveness, which will influence implementation, scale-up and overall impact.

The private sector and the need to find common ground for expanding surgical healthcare

The private sector is involved in various aspects of surgical healthcare and will play a substantial role for the foreseeable future. Private sector entities may be involved in research and development and provision of both surgical healthcare and insurance products, among others. Though in some countries, Non-Governmental Organisations and Faith-Based Organisations provide a substantial volume of surgical healthcare, these organisations are often dependent on private entities for supplies, data systems, and critical infrastructure.

Inherent differences between the private and public sectors may lead to suboptimal health system performance in terms of equity, responsiveness and efficiency. Varying incentives and motives between the public and private sectors that stem from differences in accountability need to be aligned. Promoting an ecosystem of shared value and providing a framework to guide public, private and voluntary actors will help to create a culture of working together for collective goals. For example, creating synergies to develop a digital marketplace would enable public, private and voluntary providers to bulk purchase surgical consumables and infrastructure to help deliver an essential surgical package. Such a mechanism could have positive spillover effects by enhancing the efficiency of public resource management. For example, creating more secure supply chains that use technology (e.g. blockchain) to link procurement with performance measures such as surgical outcomes. In this way, procurement of essential surgical consumables and infrastructure provides an opportunity to enhance data management. The benefits of an interoperable data system

are numerous; of importance would include the ability to forecast, benchmark and simulate surgical healthcare interventions within country health systems.

In the context of UHC, governments institute regulatory measures which aim to better align private sector involvement with the healthcare sector. An example might include expanding access to private surgical healthcare services where only a minority of citizens can afford private fees and the vast majority of people are excluded from such care. One option to expand access and make care more equitable, among others, would be for the government to negotiate prices with private providers so that more citizens benefit from private surgical healthcare services. To achieve this, private and public actors need to make explicit their interests, strengths and shortcomings, and reach agreements that align with the principles of shared value, to which they must commit.

Defining targets and metrics to measure progress of surgical healthcare expansion

The overarching purpose of the surgical healthcare movement is to ensure the worldwide provision of safe, timely, high-quality and affordable surgical healthcare to all that need it. Determination of progress thus depends on the degree to which this purpose is achieved. In order to achieve this larger purpose, the global surgery movement will need to pursue a collective strategy that achieves five aspirations: (1) receive greater political priority, (2) secure more funding, (3) establish stronger coordinating and implementing institutions, (4) build coherent coalitions within and outside of surgical care, and (5) successfully introduce and scale up a range of interventions that improve the delivery of surgical care at the facility level. Stakeholders within specific health system jurisdictions should identify suitable context-driven approaches, metrics and targets to meet these aspirations and achieve its common purpose.

Aspiration 1: Achieve higher political priority at national levels

- Identify specific entry points (e.g. injuries, child health or global health security) to access established priority health areas associated with the sustainable funding and implementation of healthcare activities.
- Develop effective and targeted engagement strategies towards key stakeholders and institutions within entry points.
- Mobilise citizens to push for prioritisation of surgical healthcare as part of the UHC package.

Aspiration 2: Secure sustainable funding from domestic, global, and innovative sources

- Develop bespoke investment cases for surgical healthcare interventions, targeted at funders within given entry points and frame within the overall global surgery positioning approach.
- Design and introduce innovative financing mechanisms to fund surgical interventions at global, national, and sub-national levels.
- Convene platforms and discussions that advance shared interests and create synergies for public, private and voluntary funders.

Aspiration 3: Establish stronger coordinating and implementing institutions

- Strengthen the Ministry of Health's role and capability as the chief coordinating and regulating institution for all actors in the health system responsible for the delivery of surgical healthcare.
- Enable the Ministry of Health's decision-making autonomy and effectiveness by providing normative frameworks and empirical evidence.

Aspiration 4: Build more coherent coalitions within and outside of surgical care

- Develop and entrench a guiding vision based on a new positioning of surgical healthcare as the chief "integrator" of silos, providing an opportunity to achieve shared goals that strengthen health systems.
- Create an enabling ecosystem that promotes the surgical sub-specialities to work together under a common umbrella, guiding vision and collective ethos, while still acknowledging their unique areas of specialization and ability to contribute.

Aspiration 5: Introduce facility-level interventions and use data to scale up and create impact

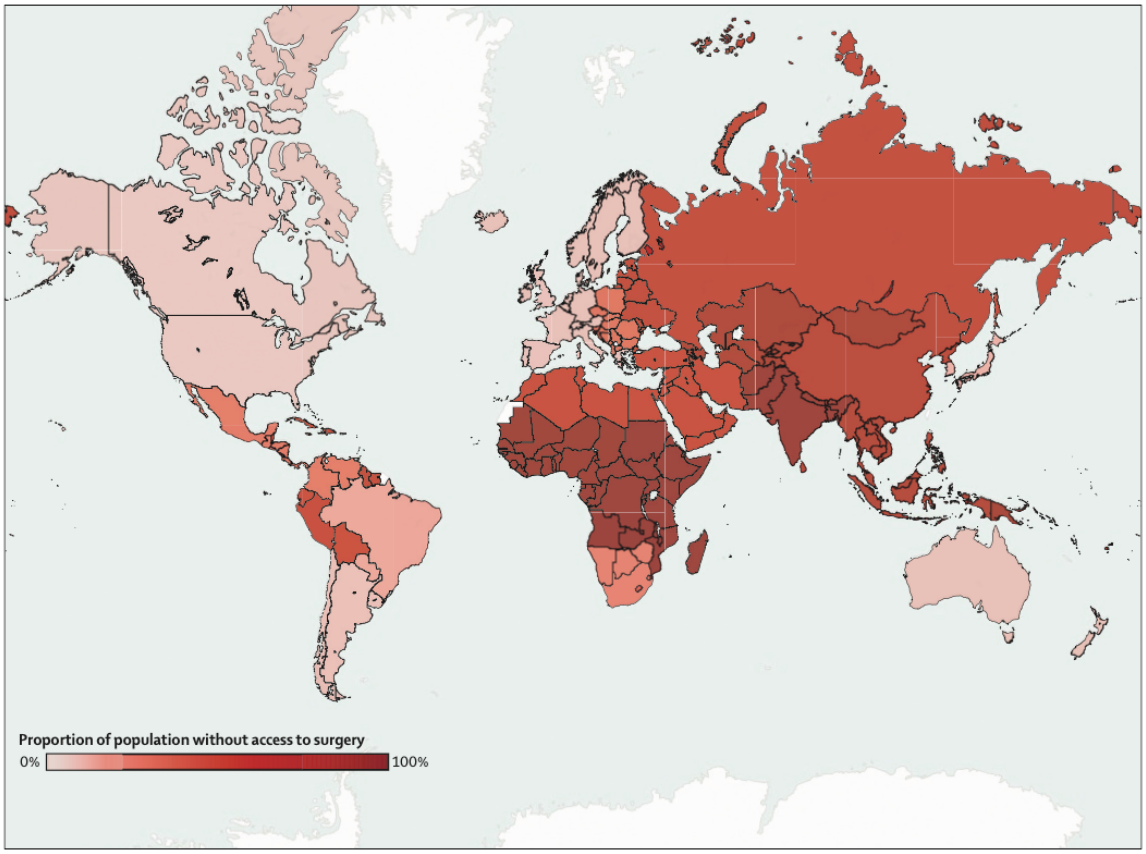
- Accelerate the implementation and evaluation of interventions that enhance surgical healthcare to develop the knowledge base and technical insights for replicating high-impact solutions and innovations for scale up at national and regional levels.
- Develop a unified and interoperable data framework for countries to report, pool and analyse surgical healthcare data for continuous monitoring, intelligence, and actionable insights.

Conclusion

Over the last decade, substantial progress has been made in the delivery of surgical healthcare globally and in the recognition of its feasibility and necessity. Contemporary healthcare demands require an escalation of these efforts and a rapid scaling up of surgical healthcare. The need is most significant in LMICs, and the consequences of inaction will be considerable in terms of avertable disability, morbidity and mortality, and broader sustainable development. Countries need to urgently move from fragmented and inadequately funded surgical healthcare provided within their health systems, to those with higher levels of organisation and funding, together with enhanced implementation that results in measurable improvements, within their unique political, economic and sociocultural contexts. There are significant opportunities for bilateral and private foundation funders to take a lead in highly targeted investments in surgical healthcare to help catalyse substantial increases in public spending over the coming decades within the context of UHC, providing a pathway to sustainability. Strengthening interdisciplinary collaboration, leveraging contextually appropriate entry points, aligning efforts with the global UHC movement, and emphasising the potential of surgical healthcare to integrate established silos and strengthen health systems, creates an opportunity to realise this noble vision.

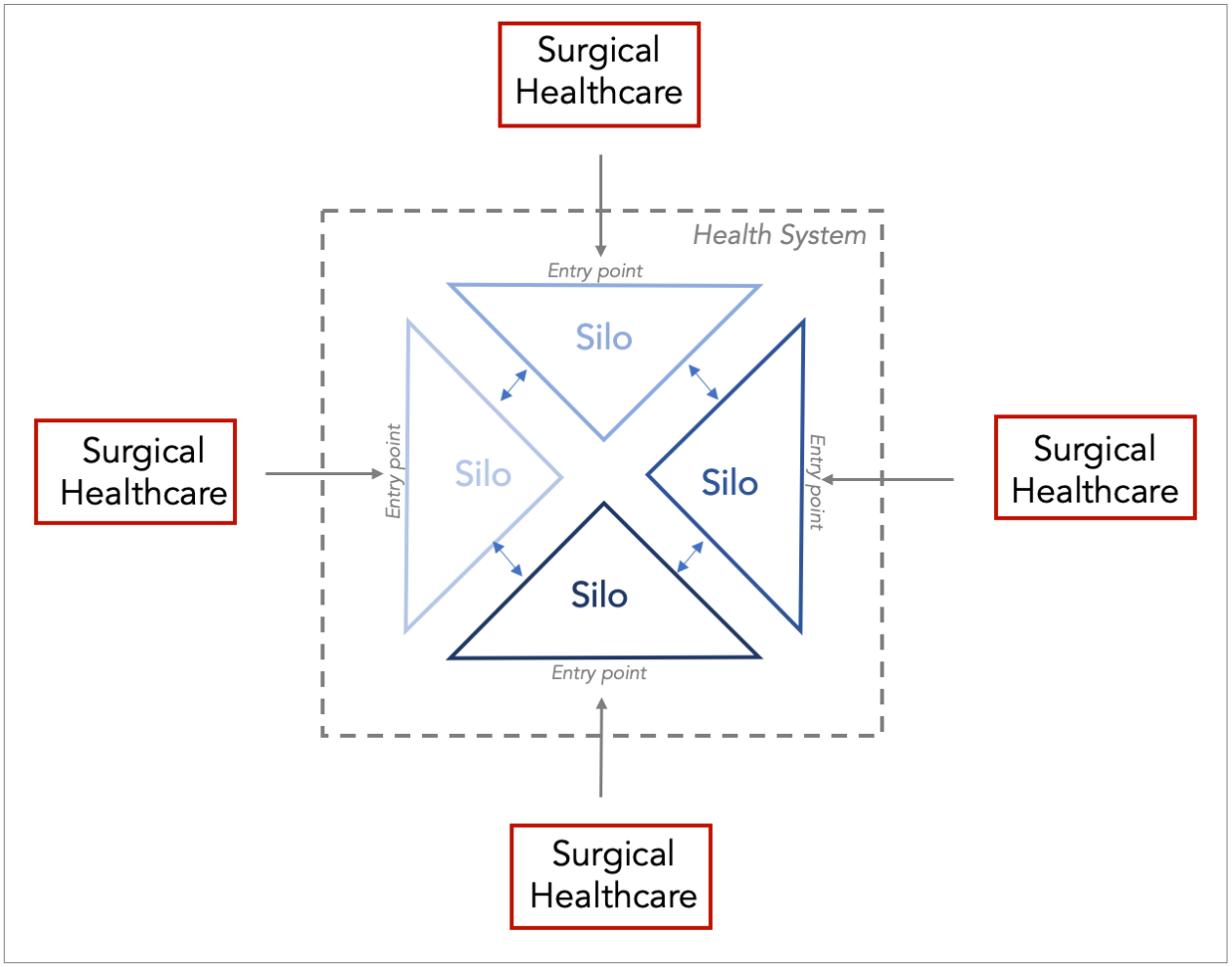
Figures and Tables

Figure 1: Proportion of people without access to safe, affordable surgery and anaesthesia



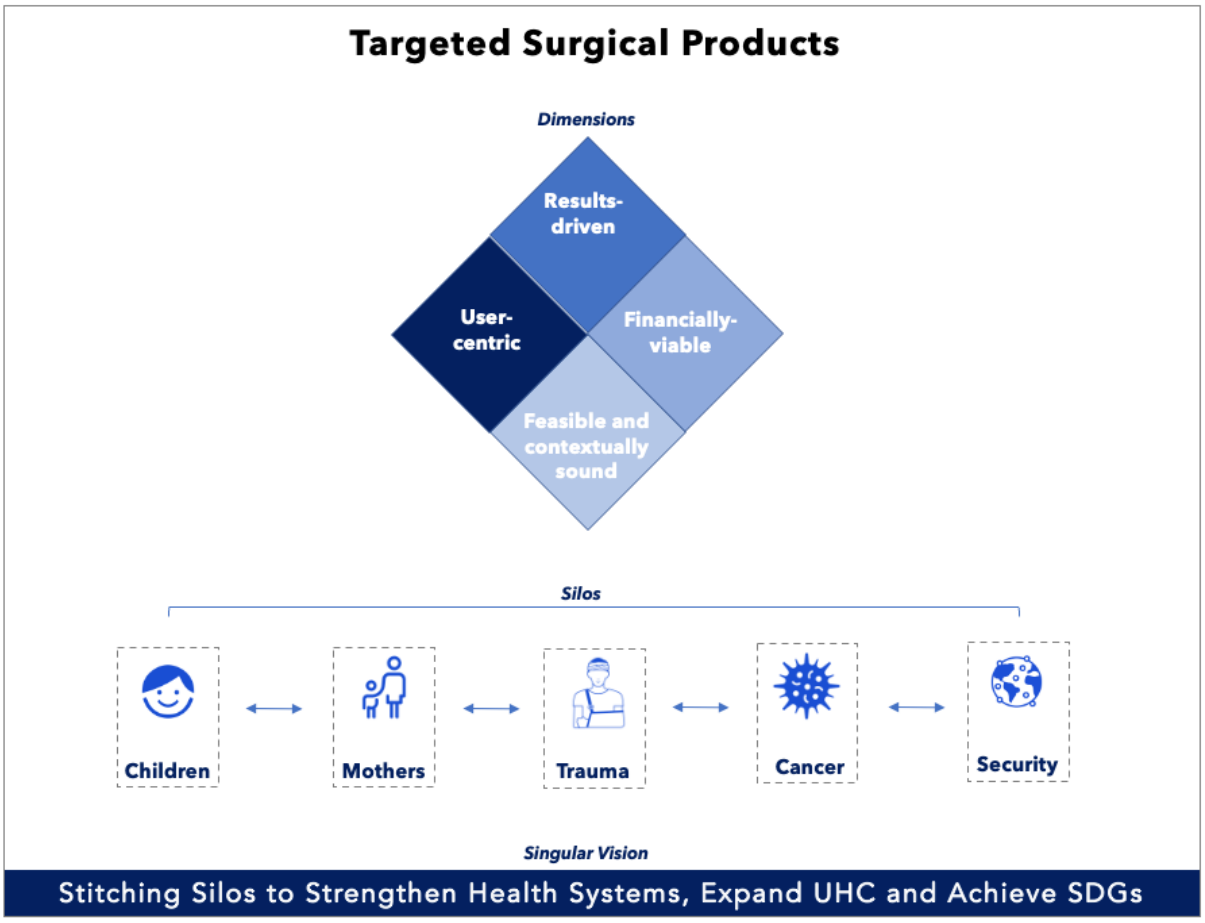
Source: Meara JG, Leather AJM, Hagander L, *et al.* Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development. *The Lancet* 2015; **386**: 569–624.

Figure 2: A new framing of global surgery: stitching silos to strengthen health systems, expand UHC and achieve SDGs



Source: Authors

Figure 3: Targeted surgical interventions to achieve a global surgery vision



Source: Authors

Table 1: Workshop questions

Workshop	Desired Outcomes
1. Integration of silos	- Define what "disrupting silos" and "integration" mean concerning NSOAP adoption and scale-up, how it occurs, and discuss examples of countries/global health movements that have overcome implementation fragmentation. - Understand how silos (both positively and negatively) affect efforts to improve surgical care and understand the challenges to the integration problem. - Identify strategies to help governments integrate NSOAPs in NSHPs and include surgical care in UHC and provide examples of countries that demonstrated success.
2. Financing and Political Support	- Define sufficient and optimal levels of political support for NSOAPs and identify promising sources of support for the LMIC context at the national and global levels. - Delineate three strategies that could build political support for NSOAPs. - Discuss the different arguments to strengthen investment cases for surgical care and outline approaches to support government efforts to finance an essential surgical package.
3. Governance and Implementation	- Discuss approaches that governments could adopt to help inform decisions needed to design an essential surgical package. - Define strategies that may support a well-governed and coordinated approach to implementing an essential surgical package at a national or sub-national level.

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