GLOBAL SURGERY

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

Global Surgery Action Strategy

2023–2030

Division of Global Surgery

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What is Global Surgery?

Global surgery is a new and exciting interdisciplinary field of enquiry, research, practice, and advocacy that aims to improve health outcomes and achieve health equity for all people who need surgical, obstetric and anesthesia care, with a special emphasis on underserved, marginalized populations and those in crisis. At present, one billion people living in Africa lack access to safe and timely surgery, requiring urgent, collaborative action across government, research, and civil society (1).

The Division of Global Surgery is a dynamic, focused, and effective team collaborating within, and beyond the University and hospital system. It is essential that universities work in partnership with the healthcare system – including government services, private healthcare, and non-profit organisations – so that evidenced-based, ground-breaking interventions can be implemented and scaled up.

Our vision is of a world in which all people have access to quality, comprehensive, surgical care.

Our mission is to improve the quality of surgical care in Africa through **research, education, implementation, and advocacy**.

We have a special emphasis on underserved populations and populations in crisis, and on improving equity and social justice in healthcare systems.

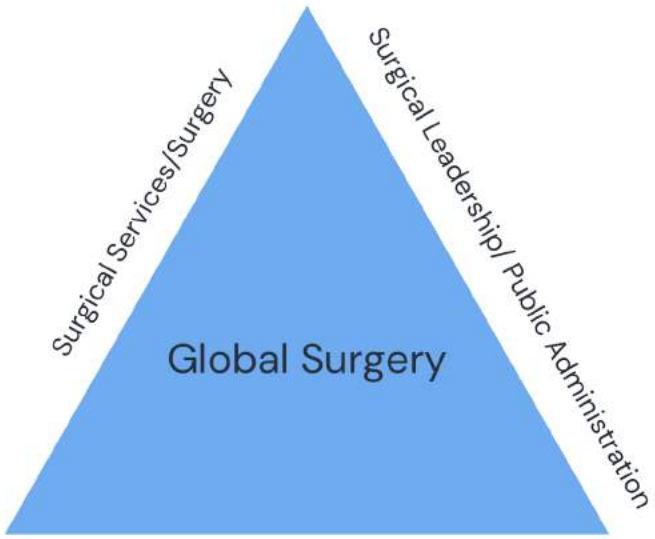
The overarching objectives of the Division are to:

- Lead an academic programme to build surgical leadership in Africa and internationally.
- Advance social justice through advocacy for accessible surgical care and implementation.
- Promote a comprehensive and cost-effective approach to surgical care.

Purpose

The Global Surgery Division has developed an Action Strategy for the next seven years, linking research, education, advocacy and implementation to increase the impact and reach of our work. The strategy allows us to move beyond traditional education and mission-based approaches to create lasting systemic change, towards a world in which all people have equal access to quality, comprehensive, surgical care.

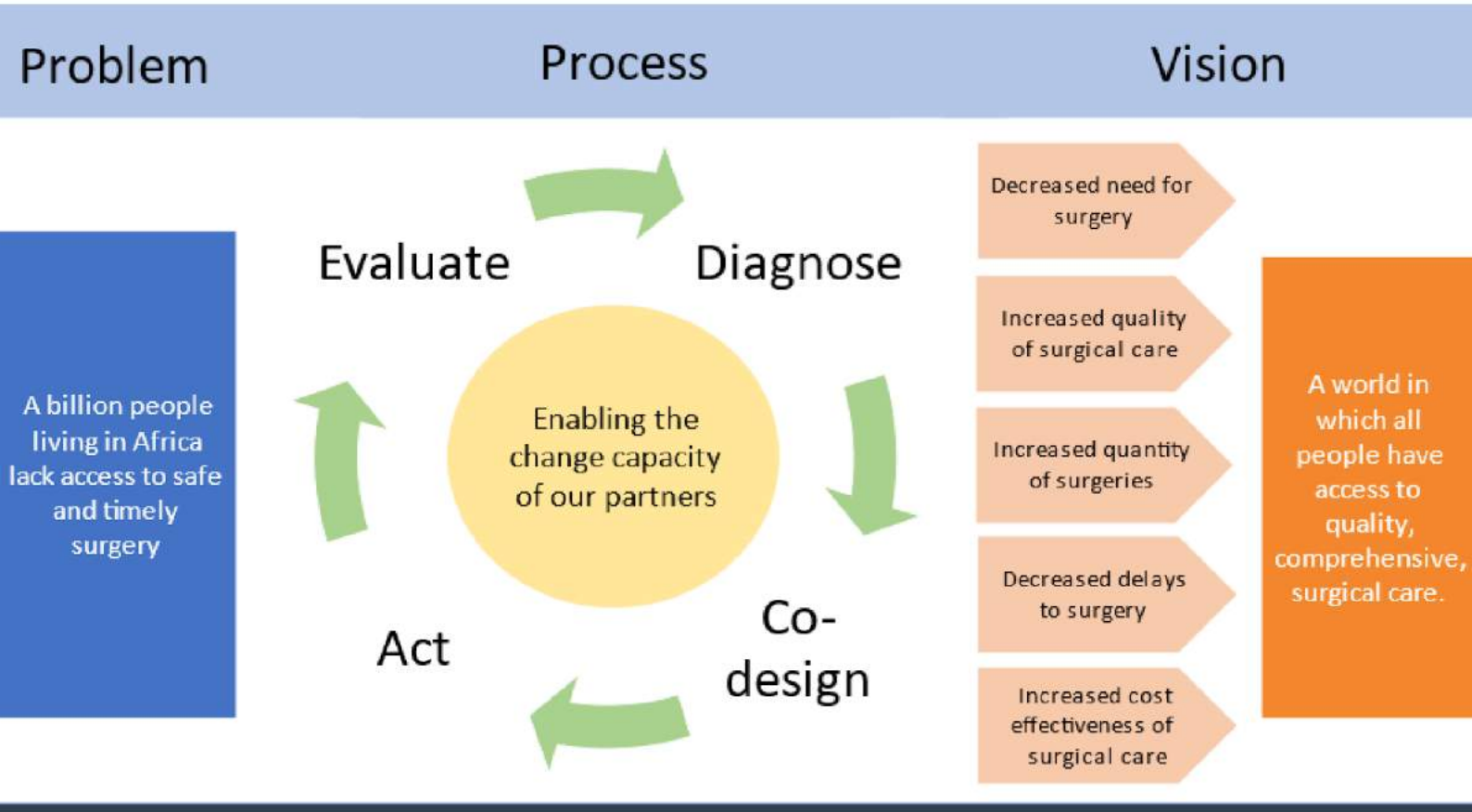
As with the Global Surgery Research Strategy (2), there are two pillars of surgery which require equal attention: the demand side, relating to access, uptake and the social determinants of health; and the supply side, relating to the quality and outcomes of care. We work between these pillars to ensure that our solutions are multifaceted and inclusive of different perspectives. We acknowledge that a significant level of knowledge, expertise and experience exists within the communities we work, in hospitals and other public health spaces, and our role is thus to collaborate and support those already doing excellent work.



This strategy is a guideline for working in a targeted way to strengthen surgical systems and services, supporting leadership and governance. The Division describes global surgery as the interface between surgical services, surgical systems and surgical leadership (3).

Our Approach to Action

We have designed a framework which allows us to design and implement surgical systems strengthening through an iterative process of diagnosis, co-design, action and evaluation, towards our impact priorities and vision. This process is designed to enable the change across communities, the healthcare system and government.



Process

1 DIAGNOSE

In this first phase, we spend time understanding the problem, context, and engaging with our constituents and partners. The process of consultation is to listen and understand needs and challenges properly. Our focus is on supporting and enabling local champions and teams to understand their system better and building relationships and trust with key stakeholders.

Through this consultative process we can identify: i) barriers in the surgical ecosystem; ii) key enablers for safe systems; and iii) key enablers of health systems strengthening.

It is important to integrate with the Global Surgery research team at this early stage, creating opportunities for people to work together across portfolios, and leveraging our advantage as a research group. To do this, we should identify clear research questions at the diagnosis stage of the process, which may include reviewing existing data, or doing research to better understand the current situation, health workforce, outcomes, resources, and barriers to care.

2 CO-DESIGN

In the co-design phase, we work with stakeholders to embed the capacity to design solutions to systemic problems. Our approach is to design pilot solutions, with a view to scaling for impact.

Methodologies related to co-design include asset mapping, a safe systems approach; exploring the surgical cascade; and using rapid change cycles (4),(5). We also employ the principles of project and programme management, considering styles of leadership, strategies for managing teams and resources, and taking into consideration risks and ethics.

We will only move from diagnosis to the co-design phase if there are basic conditions of success in place, including a champion to drive the process, a team to support the execution of the pilot project, sufficient funding to execute the pilot, and an enabling environment to support project rollout.

To establish conditions for success, we need to use project management tools, budget realistically, and identify the risks and ethical considerations of the intervention. It is not wise to proceed beyond the co-design phase if conditions of success are not met. The comprehensive co-design process allows us to mitigate against risk before we execute the project. It is our philosophy to do less, but well. The four areas we focus on in mitigating against risk are (i) fiduciary, (ii) programmatic, (iii) quality and (iv) management risks, as per the KPMG, Managing risk on Global Health.

During co-design, it is important to first understand our level of influence and power in the system - for example, what personal attributes can be used to find buy-in and support (influence vs authority). In addition, asset mapping is essential (focus on what you have and not on what you need) and stakeholder mapping (whose support do you need to succeed) and to be mindful of power dynamics within the team and between the team and stakeholders.

3 ACT

The most important part of the intervention is the execution. A well designed project may fail, and what looks like a poor idea may become a successful project. The diagnosis and co-design phase are very dependent on the individuals designing the project and the team. But the Action phase is dependent on the system and many interrelated factors.

The Cynefin® Framework (8)

Systems thinking

A system is an organised collection of the autonomous components and actors (role players) required to produce an outcome. Health systems are by nature complex because they consist of many components and role players (actors) all of which are interacting and interconnected. In the co-design phase of the intervention, you may assume that the intervention needs to be centered around the surgeon, only to find that the delayed surgery is because of other parts in the system.

EXAMPLE INTERVENTION: REDUCING THE DECISION-TO-DELIVERY TIME

From the time that the surgeon decides to operate, the steps involved include: the patient consenting for surgery; the ward nurses preparing the patient for surgery; the availability of porters to take patients to the theatre; the theatre availability; the availability of a surgical team; anesthetic team; cleaning team; availability of theatre packs; the efficiency theatre booking system; and the availability of a post-operative bed.

The action-phase requires systems-thinking and adaptive thinking. It is important to understand that every interaction that occurs within the system has an impact on the rest of the system. The impact is often unpredictable and can have small or large effects on the greater system. Due to these interactions, the systems are dynamic and constantly changing. The interactions and connections between the components within the system, are more important than any individual component. System change emerges from the way that the whole system behaves, not from any one aspect. Observing and mapping the system from various perspectives before intervening is recommended (6).

Steps to help you leverage the systems: 1) Learn the system 2) Listen to the system 3) Challenge the assumptions 4) Identify where power in the system lies.

Leading teams

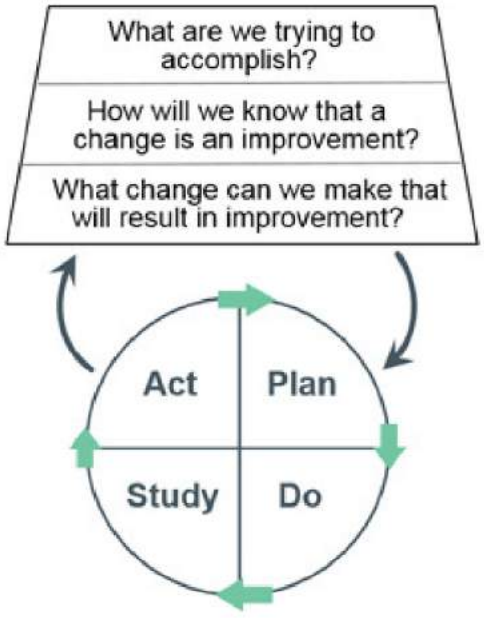
Strong leadership and governance are central to achieving change. We define power as the ability to act; the ability to implement change; as the influence leaders have over their team and others; and the ability to accomplish a goal with the help of others. As a team leader you are most likely to have more influence on your team, when they trust you, when you have the ability to inspire them and motivate them, and when you are a good communicator.

Useful tools

1) Stakeholder analysis is important in understanding the system. Stakeholders have varying levels of power, interest and legitimacy. Based on your analysis, you will have better idea of how to engage with your stakeholders.
2) Develop a communication strategy for the team and with stakeholders.
3) Map your potential barriers and enablers.
4) Plan-do-study-act.

Iterative Cycles

As systems become more complex, it becomes more difficult to predict the outcome of a planned intervention. Teams can use rapid cycles of ideas testing at small scale to probe the system, learn from the result, and use the new knowledge to plan the next test. What worked and what didn't work? You will need to develop a feedback system. The system is only as strong as the effectiveness of the feedback. What should be kept, changed, or abandoned? The team should continue linking tests, and refining the change until it is ready for broader implementation. This approach uses the The Plan-Do-Study-Act cycle as described by the IHI. If small changes are successful, then the change will eventually result in improvement. If you fail, fail fast, and redesign your action plan.



The Model for Improvement (7)

4 EVALUATE

Evaluation is a process of learning from mistakes and successes, or 'failing forward', to improve the quality of future interventions.

Our evaluation process is rigorous to ensure that we understand both the impact of our projects and the deeper questions around 'how' and 'why' an intervention may have failed or succeeded.

We ask our stakeholders:

1. What are the immediate outcomes of our project, including how closely were we able to follow our plan? (effectiveness)
2. In what ways did the programme achieve its intended outcome? (outcomes)
3. Is the project demonstrating sustainability beyond the implementation cycle? (sustainability)
4. How and why this project unfolded as it did, in this context, with this team? (relevence)
5. How do we achieve scalability? (scalability)
6. Will the project have a long-term impact on the community? (impact).

Impact Priorities

As a team, we need to focus on the outcomes we feel to be most critical for bringing about long-lasting systemic change. These hinge on the three overarching areas of improving access, improving quality, and reducing the need for surgeries.

Improving access

- Increased quantity of surgeries
- Increased cost effectiveness of surgical care

Improving quality

- Decreased delays to surgery
- Increased quality of surgical care

Reduced need

- Decreased need for surgery

We collaborate with our researchers and stakeholders to monitor and evaluate these long-term outcomes. This allows us to understand how and where best to intervene, to create long-lasting, sustainable change.

Where we focus

The Division is open to collaborating with a broad range of stakeholders and are inclusive in our partnership approaches. There are however three logical focal areas for our work are **the community, the hospital and within government.**

The Community

We believe that improving access to surgical care should start in the local community. We do this by valuing local knowledge, improving communication, and building local capacity, while balancing academic and community realities. Over time, this collaborative approach allows us to bridge academia and community.

Our goal is to improve primary surgical care in underserved communities. We can achieve this by i) understanding needs; ii) building the capacity of community healthcare workers; and iii) by providing primary surgical services.

Our work with communities provides excellent opportunities for giving champions, particularly students, the chance to engage with, and learn from, communities. Having direct contact with beneficiaries inspires volunteers from different backgrounds in healthcare and government to direct their efforts and careers towards our impact goals.

Our focus has been on health education and promotion, working with community healthcare workers and community health forums. Our intention is to expand community healthcare training and primary surgical training nationally and continentally after three years once this approach is proven.

Community engagement is a central principle of our work which includes our work with community healthcare NPO workers, community health forums, community leaders, NPO's, and other community gatekeepers. This principle helps us acknowledge and address power imbalances, enabling project success that have mutual benefit between academic and community partners, and stimulates reciprocal knowledge acquisition (7).

Community engagement is crucial to ensure that knowledge emerging from academic research is translated into community-relevant interventions and policies. It enables capacity building and local ownership of a collective vision for healthcare systems strengthening, which is key to successful implementation, adoption and sustainability.

The Hospital

Our focus is using the Model for Improvement to enable hospitals and healthcare facilities to build their own capacity to deliver life-saving anesthesia and surgical care. We identify healthcare workers up and down the value chain who are dissatisfied with the "know-do" gap, or the gap between policy and practice. We empower them with the tools and skills required to act as change agents, multiplying our impact.

Hospital leaders, particularly in rural district hospitals, are critical to functioning hospital systems (9), (10). We bridge gaps in their knowledge and skills through surgical skills training, leadership development, enabling learning communities of managers, improving and problem-solving together.

District hospitals are critical levers for improving access and quality of care (1), (11). We have partnered with two rural district hospitals in the Eastern Cape to pilot locally grown solutions for improving surgical services.

Our intention is to refine our approach through the full cycle (diagnose; co-design; implement; evaluate) over three years, then scale to ten more district hospitals in the Eastern Cape, and pilot hospitals in Limpopo, Northern Cape, Namibia and Tanzania.

In the long-term, this work will enable us to build a model that is easily scalable, resulting in improved quality of care with reduced avoidable death, and reduced pressure on larger health systems.

TWO CASE STUDIES

The first hospital our Action team worked with required simple equipment items and brief contact with specialists to refine their skills. We were able to source and supply equipment, and facilitate contact with relevant experts, enabling a step-change in the delivery of surgical burns care, minor urology procedures, and the care of patients with ectopic pregnancies. We are now assisting this facility to create a robust data capture system to describe the surgical burden of disease in more detail.

In our second pilot hospital, a busy facility on a major national highway, we are facilitating a mentorship relationship between the district hospital staff and the nearest tertiary hospital to target a particularly high burden of orthopedic trauma.

These 2 different approaches highlight the need for context-sensitive strategies and interventions and locally developed solutions.

Within Government

Governments design and implement policies and programmes at population level and decide on the resources allocated to surgical care. At present, surgeons are not well included in this decision-making and policy development process.

To make a sustainable impact at population level, we need to learn how to engage and contribute to these policy debates, and lobby for legislation change.

Our key responsibility in government is to play an expert and advisory role with national and provincial government, focusing primarily on the diagnosis and co-design phases. Where strategically necessary, we can engage in additional phases. Furthermore, we will partner with governments to run programmes and projects on capacity building, quality improvement and surgical systems strengthening.

The Division also plays a connecting stakeholders role as far as possible. A particular focus of the Division is to work with directors and decision-makers from the National Ministry of Health, NGO's and multi-national organisations who are responsible for implementation and running population-wide programmes. Our goal is to build a bridge between them and the surgical ecosystem, through exposure, information and capacity strengthening. We believe we can play an important role in supporting the development of policies, plans and strategies nationally and globally, that will improve access to safe and timely surgery.

The University

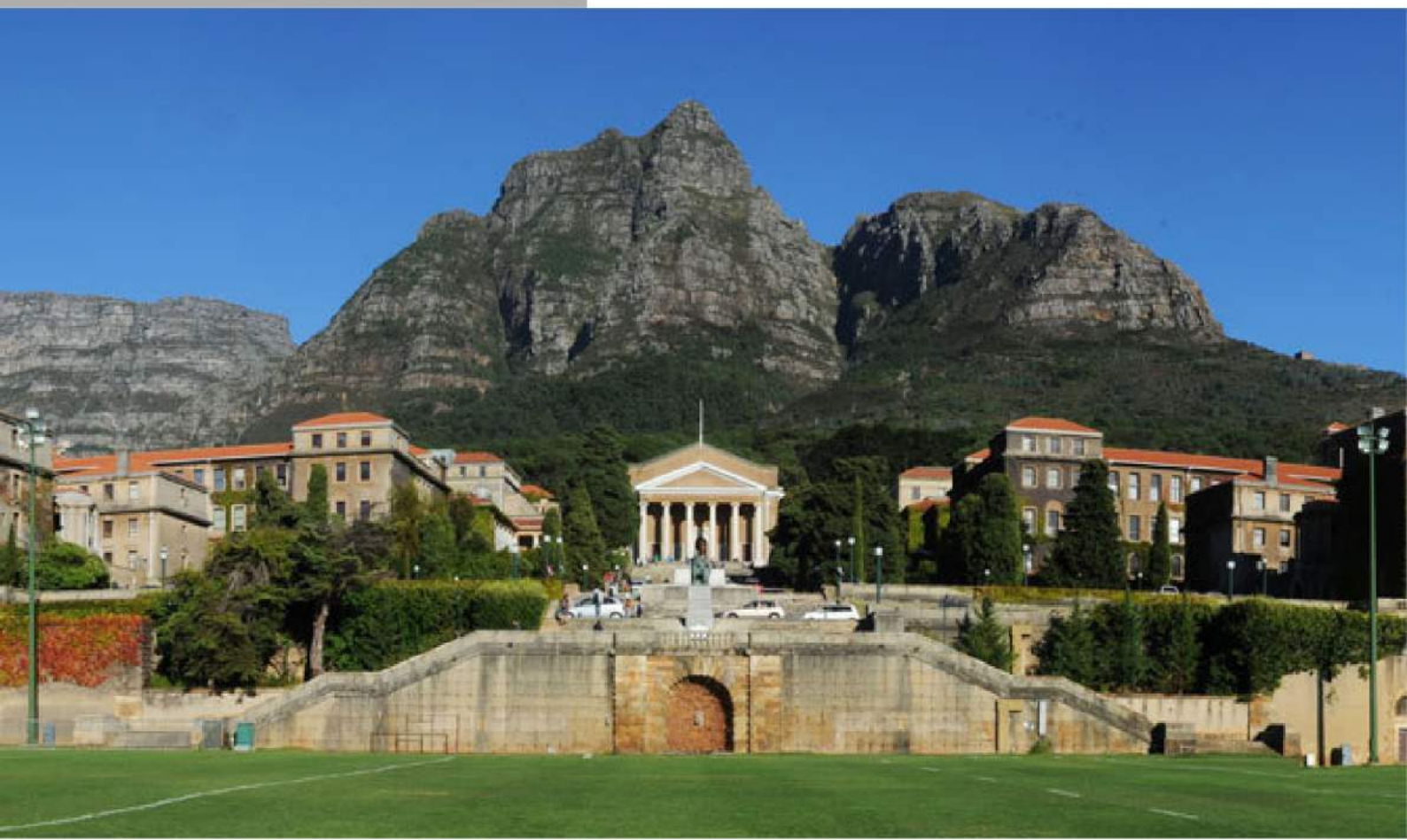
Our underlying philosophy is that when students are directly exposed to the challenges within the surgical system, they are more likely to become passionate advocates of public health and surgical reform. Thus, the Division is building its own cadre of interdisciplinary champions, who return to their professional environments and strengthen the surgical system across the continent.

Through our undergraduate and postgraduate programmes, we aim to develop a surgical systems strengthening laboratory of Global Surgery in Action projects.

We host a variety of **capacity building programmes for healthcare workers**, ranging from Community healthcare workers, to surgeons and government officials. As an academic institution, we are responsible for the training of cadres involved in the management of patients across the surgical continuum. These offerings are often at certificate level, or designed as fellowships, and organised when the lack of capacity has been identified as the main barrier to accessing surgical care.

We host the **Global Surgery Research Advocacy and Implementation Fellowship Programme**, a two-year fellowship to coach and supervise Global Surgery-affiliated undergraduate medical students to run student-led projects related to our Action Strategy.

Our **Executive Leadership in Global Surgery certificate programme** is a six-month fellowship for senior and executive leaders to train in Global Surgery, and design and implement action-focused pilot projects with support and supervision.



The Global Surgery in Action Network

We have a large UCT Global Surgery network of students, clinicians, healthcare workers, policy makers and public health practitioners. We aim to coordinate them through a formalized Action Network. This Network will be loosely coordinated through the Division as a communication platform, helping volunteers to stay aligned with Global Surgery in Action principles, and accelerating our impact objectives across the different sites in which we work (the hospital, university, government, community and beyond).

INVEST IN THE ACTION

Our projects are currently funded by national and international partners. We aim to raise a **Global Surgery Action Fund** to be used for piloting programmes and scaling-up interventions. This fund will be be open to network members through an application process.

We invite funders to partner with us in accelerating our impact!

Conclusion

This Action Strategy provides a guide to members, partners and funders as we move forward collaboratively, towards achieving our vision of a world in which everyone has access to comprehensive, quality surgical care.

This strategy is a guideline for working in a targeted way to strengthen surgical systems and services, supporting leadership and governance. We welcome the engagement of our funders and partners as we work together to deliver on this exciting programme of work.

Acknowledgements

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