

Children's Surgery : Africa

2030 ROAD MAP

**Capacity Building in
Children's Surgery to
Prevent 10 Million
Years of Disability**

“

No child should die, or live a life of disability or pain, because of a surgically treatable condition.

”

Garreth Wood
Chairman & Co - Founder





About

Kids Operating Room

Kids Operating Room (KidsOR) is a global health charity focused entirely on the provision of high quality, safe surgical services for children in low- and middle-income countries.

From our warehouse in Scotland to partner hospitals across the globe, we provide local surgeons and their teams with the infrastructure needed to transform the care available for their nation's children.

Our model, which only allows investment in local people, is sustainable, builds capacity and reduces reliance. Just as they do, we want local surgeons and anaesthesia providers to be able to care for their own nation's children. Therefore, we never send someone to do an operation that can be done using local expertise. And so, our vision is a world where every child has access to safe surgery in their own country and from a local surgical team.

Ultimately, our vision is to one day not be needed.

Where we have invested, our impact has been transformational. Our projects don't just benefit the children who receive the urgent care they need; they boost confidence in the local team, help staff retention, improve hospitals, significantly reduce childhood disability, save lives, bring economic benefit and, ultimately, bring hope where there was none.

Our support extends beyond the initial installation, too. Ongoing support is available in the form of biomedical engineering assistance and our research program is currently developing the world's largest ever data collection; showing the true impact of investing in children's surgery.

KidsOR offer a real, outcomes based solution that will help move nations towards achievement of eight of the Sustainable Development Goals.

As we move in to the Twenties, KidsOR stand ready to provide record investment in children's surgery across Africa. The immediate outcome of which will be 10 million years of disability prevented as some 635,000 children access emergency and essential care. The economic benefit to partner nations will go on to be an estimated \$5.6billion (US).

We look forward to delivering for the children of every nation we partner with, to investing in local people and to seeing every nation's children cared for within their own borders. Most of all, we look forward to bringing hope to the sickest child in the most remote community.

Garreth and Nicola Wood
Founders

KidsOR

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Campaign Partners

Kids Operating Room are grateful to the following organisations who have contributed to the creation of this Road Map.

- The College of Surgeons of East, Central & Southern Africa (COSECSA)
- The West Africa College of Surgeons (WACS)
- The University of Oxford
- Yale University
- The University of Edinburgh
- The World Federation of Societies of Anaesthesiologists (WFSA)
- The Global Initiative for Children's Surgery (GICS)

Chapter One

Context & Introduction

The world in which we work

As the most vulnerable group of patients, children face the greatest healthcare inequities globally.

In most of the world's poorest countries, children comprise more than half of the population and 85% are expected to require a surgical intervention by age 15. Today, 1.7 billion children globally do not have access to surgical care.

Children's surgical needs have been neglected and their preventable deaths uncounted while the global child health movement has made great strides tackling communicable disease.

In contrast to infectious diseases, for example, curable cancers advance untreated, or at best partially treated, in children across the world's poorest nations. Children suffer the agony of chemotherapy only for the tumour to start re-growing as the surgery needed to complete treatment never comes.

Meanwhile, more children die of injuries than of HIV, TB and malaria combined. Many of these children would survive with access to the surgical care they need.

And in a further display of global inequality, congenital anomalies, half of which are treatable surgically, are increasing. However, only a tiny fraction of these curable conditions are treated.

These children have no voice and no vote. When available, operating time is limited with adults preferred for use of these limited spaces. Indeed, there is poor public awareness that children require surgery at all, and providers and parents alike avoid anaesthesia in children for fear they won't survive.

Many communities and families confronted with a child with a congenital condition lose hope and may abandon the child. At best, families often fracture or experience even more poverty. Resources essential for children's surgery have been omitted in planning surgical services because "children aren't a priority". The children's surgical workforce is limited and existing infrastructure ill-equipped to care for children.

Yet solutions for children's surgery do exist, and have been scaled up, but mostly piecemeal and only for some conditions – cleft lips, club feet. These are a small proportion of the burden of surgical disease.

Awareness and identification of children's surgical conditions in even the most basic rural centres is feasible and referral to care can be facilitated by having the right technology in the hands of the right frontline health workers. Adding more trained surgeons and more trained anaesthesia providers, supported by the African Colleges of Surgeons and by the WFSA, and providing high-quality Operating Rooms designed and dedicated for children's surgery will transform and save millions of lives.

The mission to correct surgical inequity must start with the poorest child in the most

remote village. These children can have hope. Access to safe surgery works and it can transform the landscape of global healthcare.

Kids Operating Room are the only global organisation dedicated to providing these solutions for children. This roadmap sets out our Africa model to save millions of children from needless pain, disability, abandonment and death.

The time to act for these children is now.

Africa 30

In partnership with the organisations listed at the front of this document, the Africa 30 campaign has been designed to deliver real, sustainable change to the provision of healthcare for millions of children in Africa. We will create 120 centres of excellence for Children's Surgery and we'll create the capacity to save thousands of lives, prevent 10 million years of disability from ever happening and generate significant economic benefits for partner countries.

Aims

Our aim is to bring urgent and essential care to millions of children. Transforming lives, averting disability and placing the necessary 'seeds' in place to allow sustainable and essential children's surgical services to grow.

We will:

1. Create 120 centres of excellence for Children's Surgery across Africa during the decade of the 20s.
2. In each one, create a dedicated and highly equipped Operating Room.
3. Train 120 highly skilled paediatric surgeons and focus their work in the countries most in need.
4. Train 120 highly skilled anaesthesia providers to work together with the surgeons.
5. Avert more than 10 million years of disability.
6. Provide essential surgical care for 635,000 children initially. In time this will grow to be many millions of children as a legacy of the investment.
7. Bring an awareness of the plight of children unable to access emergency and essential care when needed, and the economic benefits of having children's surgical services in place, to the political establishments of Sub Saharan countries.

Our model is well considered, efficiently administered and highly cost effective. We will deliver life-saving and/or life transforming care for less than \$100 per child.

We will deliver in four core areas:

1. New Infrastructure
2. New People
3. Political Will
4. Research

Infrastructure

Both in the centres where people train, and in the hospitals where they will go on to work, an investment in infrastructure is needed. Giving the right tools to skilled people, allowing them to maximise their impact, is what KidsOR does best. We will scale up our investment in this area to ensure that the right equipment is available for training and that the same equipment is available in the hospitals where the surgeons and anaesthesia providers go on to work. After graduating, every surgical team will work in an Operating Room that meets the Global Initiative for Children's Surgery's 'Optimum Resources for Children's Surgery' requirements.

People

We will support the training of 120 surgeons across Sub-Saharan Africa. These surgeons will graduate as highly skilled, self-sufficient experts in their field. Over five years of training they will develop into world-class paediatric surgeons, capable of delivering high-quality surgical services and, importantly, capable of training the next generation of surgeons. They will not only deliver urgently needed care in identified high-need locations; in the countries into which they go on to work they'll also act as the seeds of a new healthcare service. From them will grow a new generation of skilled surgeons. And from them will come a sustained solution to the lack of essential surgical care for children.

We recognise too the need for safe anaesthesia provision and understand the challenges involved due to the global shortage of skilled anaesthesia providers. There can be no safe surgery without safe anaesthesia and the surgical team can't function without it. We will therefore work with the World Federation of Societies of Anaesthesiologists to deliver more training for both physician and non-physician anaesthesia providers and to encourage the provision of more specialist physician anaesthetists to lead the development of a sustainable anaesthesia workforce for children in Africa.

Political Will

We recognise the need for sustained Political Will to achieve long-term change. Securing this for children is vital to ensure the success of the project. Every government who partners with us will receive an exceptional investment in their people and their healthcare infrastructure. This will be planned with each Ministry of Health, so they can control and plan for the development of surgical services for children in their nation. In return they will be asked to do the following:

1. Identify an individual within the Ministry of Health who will be the 'Lead for Children's Surgery'
2. Pledge to prioritise children's surgery by ensuring it features in their National Surgical Plans.
3. Employ the graduating, highly-skilled surgeons and anaesthesia providers.
4. Commit to providing basic supplies to the surgical teams when they begin their work in each county and maintain the equipment.

Research

Recording, assessing and reporting on the impact of this investment is vital to sustain political will, support the fledgling surgical teams and to provide donors with clarity on the difference they have made. Our partners at Yale will lead an independent research project looking at key factors in terms of clinical output while also developing a better understanding of the social and financial factors influencing access to surgery for children. Local data collectors will be employed at every partner hospital with reports due to be published on a national and regional basis. Once completed, this will be the largest ever research project into the impact of surgical systems intervention for children. It will show the real cost, and benefit, of saving a child's life, of preventing a life of pain and disability and of transforming children's futures.

Surgery in the Sustainable Development Goals



Surgery, and in particular Children's Surgery, where an investment is being made in the future of a nation, has a key role to play in eight of the Sustainable Development Goals.

Surgery is a definable, recordable and outcomes-based action that can deliver real change in-line with the Sustainable Development Goals.

Clearly in SDG3 there is a role for surgery. In every single disease pathway there is a place for surgery, often treating the most sick and vulnerable patients. However, the proven economic impact of children's surgery, the capacity for surgery to allow girls to attend school, the removal of disability, investment in healthcare infrastructure, the provision of essential care to the poorest of families and the overwhelming benefit to society of having disability averted and health restored mean an investment in Children's Surgery has a real and measurable impact in Sustainable Development Goals 1, 3, 5, 8, 9, 10, 16 and 17.

Chapter Two

Campaign Details

New Infrastructure

Kids Operating Room has a proven track record in delivering new infrastructure projects and will scale up delivery across COSECSA and WACS countries to ensure the delivery program can be achieved.

It is expected that some investment will be required in certain training centres and this will happen in the early Twenties.

KidsOR will then commit to creating 120 new Operating Rooms dedicated to children's surgery across the high-need countries identified prior to the commencement of the campaign. In each of these a full-set of equipment and paediatric instrumentation will be provided along with (provided further speciality training has been completed) laparoscopic and endoscopic equipment.

In addition, investment will be needed in hospitals starting in 2021 as the initial surgeons begin their work. These hospitals will be identified and prioritised for early investment.

More significant scaling up of infrastructure investment will be required for 2025, 2026 and 2027. During these three years at least 70 trainees are expected to graduate and become fully independent paediatric surgeons. An extensive planning system and investment timetable will be required to deliver 70 new Operating Rooms during three years and KidsOR will investigate the pros and cons of locating some warehouse facilities and installation teams in Africa to ease the installation process.



Picture 1: A standard KidsOR Operating Room of the quality all 120 new surgeons ought to expect.

People – The Number of Surgeons who can be trained?

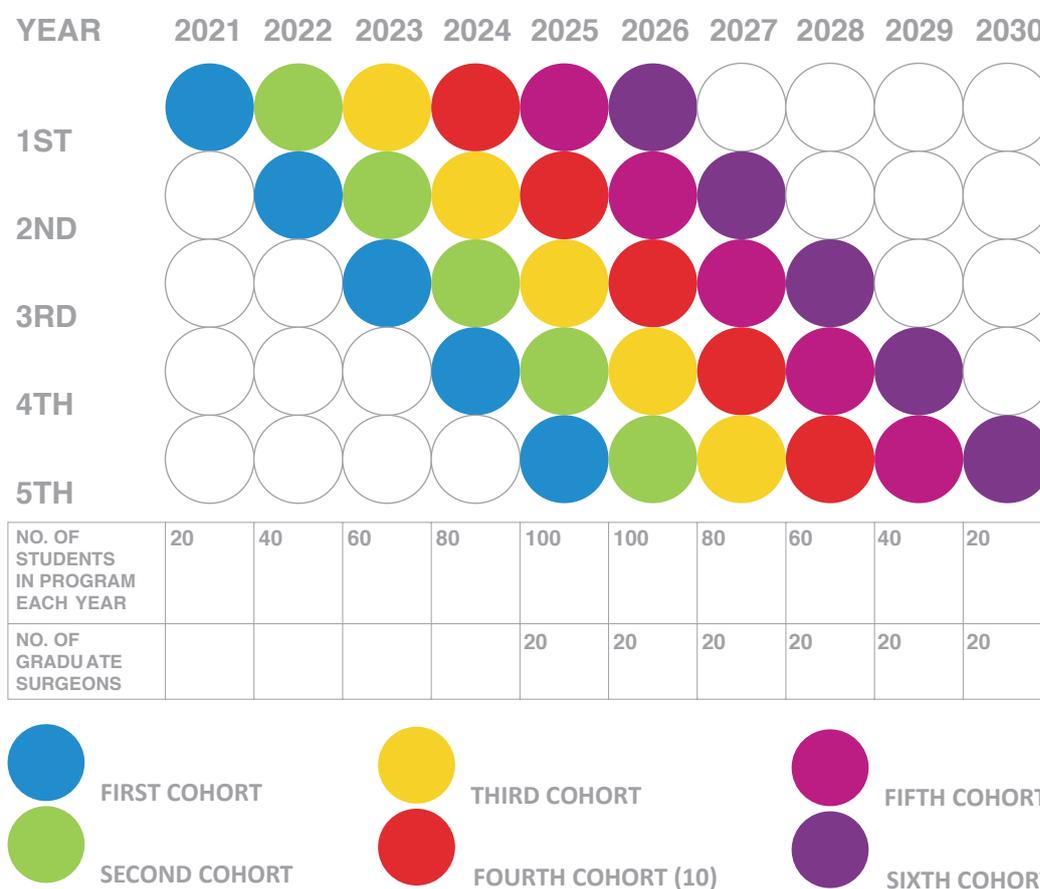
We propose to fund a bursary, rent allowance, travel allowance and additional education allowance for 120 trainee surgeons; all completing a five-year training program. When these surgeons graduate we will also build each one a dedicated paediatric Operating Room in the hospital where they go on to work.

Countries most in need of support will be identified and prioritised, especially within WACS where there is a further disparity in provision with some countries having achieved relatively sustainable services whilst others have yet to develop services for children.

As such, placements will be advertised in a way that it is clear which country the applicant will go on to work in. This will allow workforce planning to be carried out by that country/hospital and it will allow the Operating Room investment to be planned in a suitable and timely manner.

To achieve the training element of the campaign, within existing infrastructure capacity, the number of graduating surgeons will be limited to 20 per year. This will see the project run through the decade of the 2020s.

Assuming for now that no existing students join the scheme, the training schedule will look like this:



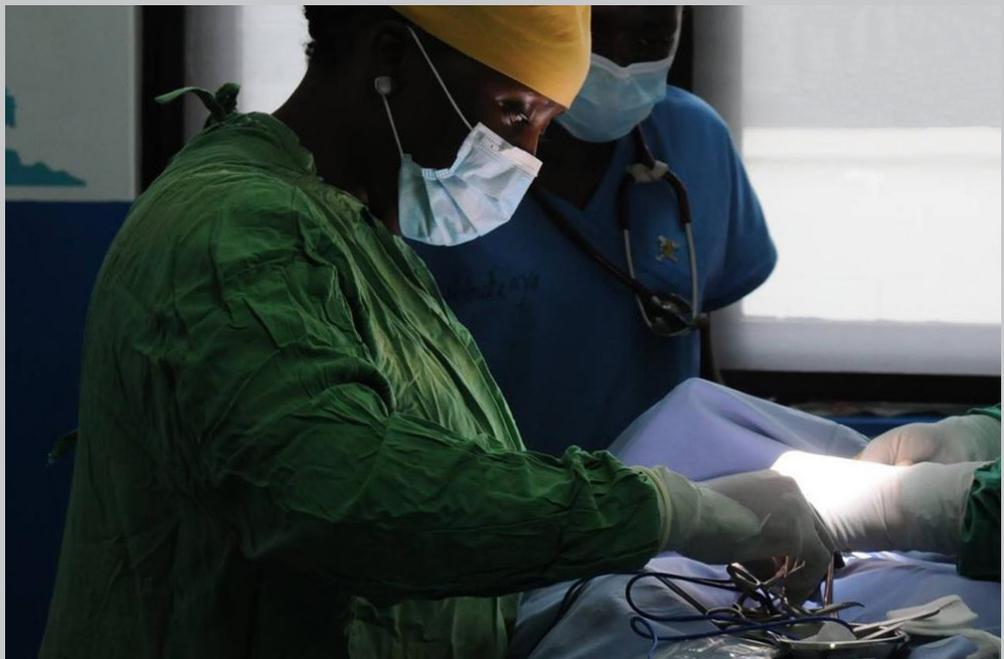
A program of Operating Room development will be planned to ensure all 120 Operating Rooms are ready in time for the graduating students. Further, it is expected that in the COSECSA region some investment in training facilities may also be required in the early phase of the project. On-going development of these Operating Rooms is then expected throughout the duration of the project.

Existing Trainee Surgeons

It is recognised in the planning of the campaign that existing trainees ought to be offered the opportunity to join the funded program. Many existing surgical trainees receive no remuneration for their training and rely on donations, family and usually working night shifts on hospital wards to fund their training. This leads to a high drop-out rate and brings risk of exhaustion during surgical procedures.

A typical Children's Surgery Resident's lifestyle and remuneration are shown in Case Study One:

Case Study: Dr Arlyn Bauer, Uganda



Dr Bauer completed her general surgery residency in July 2014 and wished to specialise in children's surgery. She was selected to join the paediatric surgery unit at the Mulago National Referral Hospital in Kampala the following month.

Dr Bauer immediately started treating patients, running the Outpatient Clinic and seeing between 80 and 100 children each week. She would consult with families, assess and triage patients and decide on referrals to other services.

In addition to the in-patients, Dr Bauer worked with the Emergency Room to ensure the 7 to 9 emergency cases received daily, who required surgery, were admitted and cared for.

At first, Dr Bauer operated on a high volume of smaller operations to “get used to working on children.” As her training progressed, so too did the complexity of operations.

From Day one, Dr Bauer was an integral part of the children’s surgical team in Uganda, running clinics, operating on children and managing emergency situations.

Throughout the five years of her paediatric surgery training she received no remuneration and relied wholly on donations to survive.

Dr Bauer received a gift of \$500 a month from the charity Global Partner in Anaesthesia and Surgery, which she used to cover rent, food and travel. Dr Bauer also had medication to purchase for an elderly relative and from time to time, as funds allowed, a senior Ugandan doctor gave her donations to help her manage.

Dr Bauer will graduate in December 2019 as a Paediatric Surgeon. She clearly recalls colleagues who were unable to survive the training program due to lack of funding.

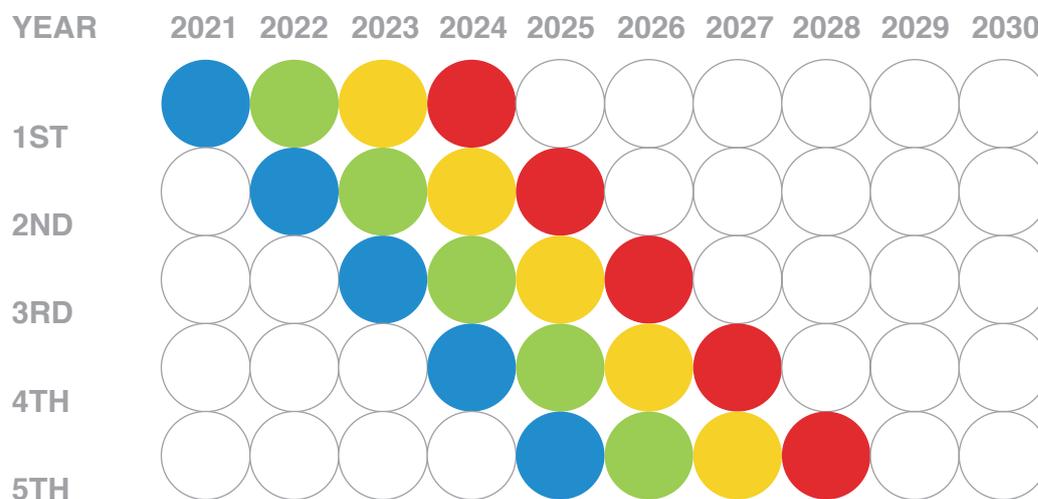
By offering these trainees an opportunity to join the funded program, we will bring them into the scheme, provide the support they need and we will ensure our impact begins at the earliest opportunity. In return, they will require to be bonded to the program for a set number of years, as detailed below.

At present there are 25 paediatric surgeon trainees in COSECSA and more in WACS. Of those currently training in WACS, few plan to go on to work in a designated ‘high-need’ country. It is common for graduating surgeons in WACS to prefer to work in countries such as Nigeria, where there is an established service and less overwhelming demand.

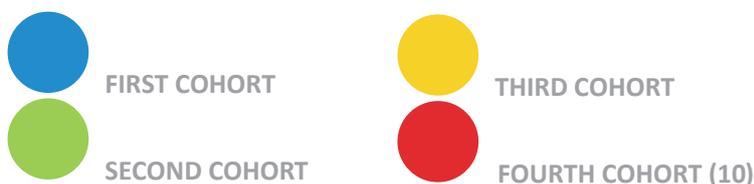
However, for the purposes of planning at this stage, it is assumed that the number of trainees in WACS willing to join the program and work in high-need countries is also 25. Once a review has been concluded it is suspected that this number will be lower.

The 25 trainees in COSECSA are evenly spread across the five-years of the training program and, again, it is assumed for now that this will also be the case in WACS.

Assuming all of them join the program, the impact of these trainees on the graduation model is shown below. In order to maintain the correct number of new surgeons (120), the final cohort will be 10 trainees. The project will reach its goal two-years



CURRENT TRAINEES	50	40	30	20	10					
NO. OF STUDENTS IN PROGRAM EACH YEAR	70	80	90	90	80	50	30	10		
NO. OF GRADUATE SURGEONS	10	10	10	10	30	20	20	10		



Bonding

A major risk to the success of the campaign lies in trainees accepting funding for the duration of their training and then leaving the public service and/or the country to work elsewhere. A ‘bonding scheme’ is therefore planned whereby trainees will be required to work in their designated country for a set period of time following graduation.

To ensure compliance, this bonding scheme will operate as a loan. They will repay this loan through time-served in the public health service of a particular country.

Those who complete the minimum time requirement will have repaid their loan in full, and no financial repayment will ever be required.

Participants will be bonded to the public health system of a particular country for at least 60% of the time they received financial support, rounded up to the next full year. For the avoidance of doubt and for clarity on the bonding scheme, any trainee joining the paediatric training program will be deemed to have taken part in a full-year of funding no matter when during the year they commit to the paediatric service.

Therefore, for example, a surgeon who accepts five-years of funding during their training will be required to work for 3 years (60%) no matter when in their first year of training they decided to focus on paediatrics.

The bonding commitments are shown as follows:

DURATION OF SURGICAL TRAINING (YEARS)	SUPPORTED LENGTH OF BOND (YEARS)
5	3
4	3
3	2
2	2
1	1

Those wishing to exit the program early will be required to repay a proportion of their funding based on the percentage of time served in the public health system of their designated country. Therefore, a surgeon who has had five years of funding and who decides not to take up their post will repay 100% of their funding. A surgeon who has completed half of their public service commitment will repay 50% of the funding they received.

Dealing with Failure

Inevitably, some trainees will fail their exit exams. These people usually have to repeat their exams one year later and it would be naïve to assume 100% will pass first time. In order to ensure maximum return on investment, a failure rate of 10% will be assumed and planned for to allow these trainees to repeat their final year in an enhanced support program. This way the investment made in them will not be lost.

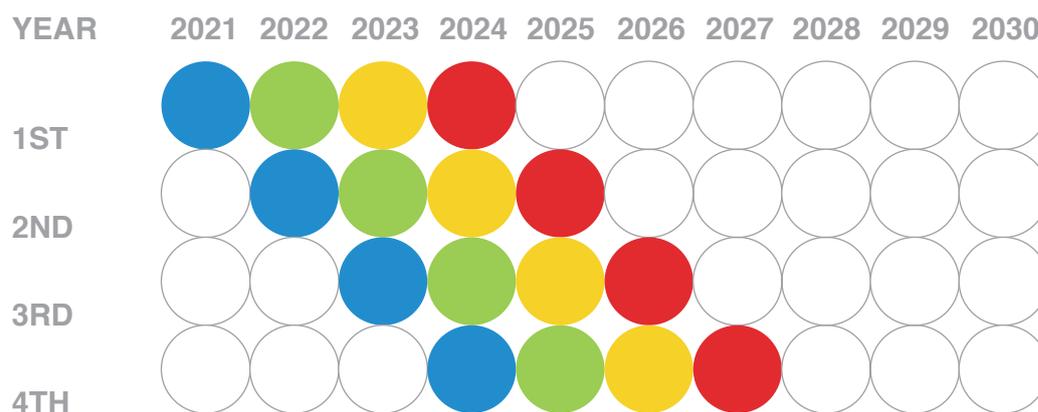
Anaesthesia

Without safe and quality anaesthesia provision, the investment in surgeons and infrastructure will not be fully utilised nor will the patients receive the safe and quality care they need and deserve.

Equally however, there is a global shortage of physician anaesthetists that is most acutely felt in Africa.

In accordance with the WHO-WFSA International Standards for a Safe Practice of Anaesthesia, our preferred model of care is to see specialist paediatric physician anaesthetists providing care for children during an operation. Where this is not possible, the most common approach is for non-physician anaesthetists to provide care and a trained and dedicated provider is essential to provide care before, during and after every surgery.

Recognising the reality of this landscape, alongside a requirement for sustainability and leadership, we will fund the training of 120 physician and non-physician anaesthesia providers through existing diploma, nursing and medical qualifications alongside specialty training in paediatric anaesthesia. Our model will train 40 specialist physician anaesthetists (4 year training MMed) and 80 non-specialists (+-1 yr training diploma / nurse anaesthesia)



NURSE/ DIPLOMA	10	10	10	10	10	10	10	10		
NO. OF STUDENTS IN PROGRAM EACH YEAR	20	30	40	50	40	30	20	10		
TOTAL QUALIFYING EACH YEAR	10	10	10	20	20	20	20	10		



These providers will be bonded to their designated country using a similar formula as for the surgeons (i.e. 60% of the time they were financially supported, but with a minimum 2 year commitment for all including the nurses / diplomates).

KidsOR will work with and through WFSA, its African member societies and African educational institutions to deliver the above and to ensure safe anaesthesia care in every Operating Room.

Political Will

Securing and sustaining political will is important throughout the duration of the project as the services designed, developed and delivered will operate within the Public Health service of partner countries.

Starting at the World Health Assembly in Geneva in May 2020, the campaign will report back every two years on progress and impact. Both in the form of a written bi-annual report and an update at the WHA, Member States will be regularly informed of progress and next steps.

Each member state will also be asked to appoint an individual within their respective Ministry of Health to be the lead for Children's Surgery. Regular contact and reporting to these individuals will take place in-between formal, bi-annual updates.

Finally, a small team, based in Africa, will lead on sustaining profile and political support for the campaign throughout the duration of the decade. Presenting and reporting at key meetings and conferences and ensuring delivery of key actions committed to by Member States and the respective Colleges of Surgeons.

Research

Successfully monitoring the progress and impact of the program is key to providing evidence of what has been achieved. It is hypothesised that this funding will act as 'seed funding' – setting in place a new healthcare system in many countries and bolstering fragile systems in others. It will be the catalyst not just for patients to access essential care but for the future development of children's surgical services through the subsequent training of the next generation; and so on.

Capturing that data and reporting on it in an independent and open way will allow donors and partners to fully appreciate their impact and it will allow future projects to learn and evolve from our actions.

Chapter Three

Financial Implications

The cost of delivering the campaign has been carefully considered and discussed in a number of forums. Workshops have been held with further discussions, involving surgeons and anaesthetist from both COSECSA and WACS, taking place across Africa. Further, the Africa 30 working group have discussed the issue of funding at length.

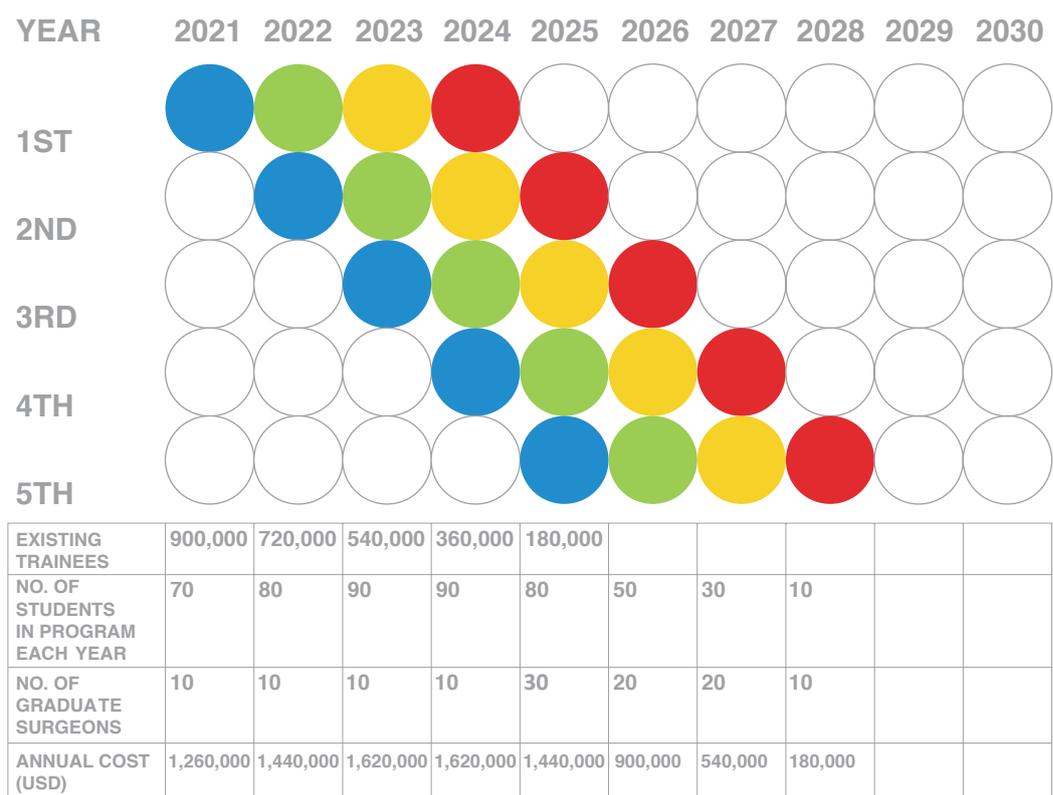
Getting the balance right between creating an attractive funding model to draw quality doctors into the surgical training program, without creating an inappropriately close (or even inverse) financial arrangement between trainers and trainees, is paramount.

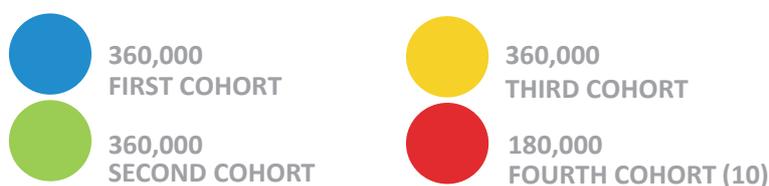
Further, an appropriate funding model for the respective colleges is required to allow them to administer the program and manage the increased number of trainees.

The proposed funding arrangement for surgeons is as follows. All figures are in US dollars and all trainees on the program will receive this paid direct to them as a grant:

- Monthly:
- Bursary: \$1,000
- Rent allowance: \$200
- Travel allowance: \$100
- College admin fee: \$200
- Monthly fee per trainee: \$1,500

The cost of delivering the training element of the project to graduate 120 surgeons, assuming existing trainees do join as detailed above, will be as follows:





Allowing for a 10% repeat rate on the final year, the cost of trainees failing their exist exams is projects to be \$216,000

The total cost for training bursary, rent allowance, travel allowance and fees to the respective colleges to administer the management of the trainee surgeons is therefore:

\$9,216,000.

Included in this total, the colleges will be paid fees of \$600,000 each (\$75,000 per annum), over the duration of the project to manage the additional trainee surgeons. These funds will be used to employ a small team to manage the training schedules and rotations between hospitals.

Education Allowance

There are many strengths to the current mentor-based training system, within set curriculums, not least of which is the very hands-on training given. However, there are opportunities in such a model for disparity of training quality. As such, and to help ensure all trainees on the program go on to graduate, a standardized on-line academic resource (similar to those already in existence for adult surgery) is to be developed.

A fee of \$15,000 per student is proposed to help fund this and to allow them full and free access to the resource. This is a one-off education grant that will apply to all 120 surgeons in the program and will be paid direct to the providers to go towards the cost of delivering the service.

Total education fees: \$1,800,000

On completion of the program this resource will continue to be available to trainee surgeons in Africa and, indeed, beyond.

Anaesthesia

A diploma in anaesthesia or a nursing qualification typically takes minimum 12 months to complete. For each provider this is costed at \$25,000 all inclusive to cover travel costs, living costs, fees and examinations. 80 providers will receive this level of training.

Nurse / diploma provider costs: \$2,000,000

An MMed in anaesthesia typically takes 4 years to complete. For each doctor this is costed at \$100,000 (or \$25,000 per annum) to cover travel costs, living costs, fees and examinations. 40 providers will receive this level of training.

Physician provider costs: \$4,000,000

All 120 providers will also have access to online anaesthesia education, paediatric anaesthesia and simulation training courses, mentoring, refresher training, ongoing skills and competency assessment and the support to ensure safe paediatric anaesthesia.

CME and mentoring costs: \$2,600,000

At each hospital an anaesthesia capacity baseline will be conducted prior to each OR being established. Ongoing monitoring of anaesthesia related patient outcomes, adverse events and post-op recovery is essential to the success of the programme and is costed at \$5,000 per OR.

Anaesthesia evaluation costs: \$600,000

Each Operating Room must have the necessary anaesthesia equipment to deliver safe paediatric anaesthesia. This is costed below under infrastructure, and includes anaesthesia machines, ventilators, patient monitoring devices and airway kits that are part of every anaesthesia providers essential requirements for safe care. 120 ORs will receive essential anaesthesia equipment alongside training in its operation and maintenance.

Excluding equipment the total cost of ensuring a safe paediatric anaesthesia workforce for 120 Operating Rooms is:

\$9,200,000

Infrastructure Investment

To develop an accurate cost for the provision of 120 Operating Rooms in as-yet unidentified hospitals is challenging. However, for the purposes of planning it is possible to allocate a standard unit cost based on previous experience.

As such, to identify, survey and install fully functioning Operating Rooms dedicated for children's surgery and fully equipped with, at least, endoscopic equipment we can assume a cost of \$200,000 per OR. The total cost for 120 Operating Rooms, over the duration of the program, is therefore:

\$24,000,000

Research & Impact

Conducting research on the impact made by 120 new surgical teams working across low-resource settings will involve a network of data collectors. In turn, they will amass a globally significant data-set showing the procedures carried out, the reduction in disability and subsequent economic benefit to the respective nations.

Based on early evidence from existing KidsOR Operating Rooms it is thought the impact of the project could be as high as:

635,000	Number of children who are projected to receive essential surgical care during the 2020's .
10,800,000	The number of years of disability that could be averted across Sub Saharan Africa by the introduction of children's surgical services through this program.
\$5.6 BILLION	Projected economic benefit to nations by treating injured and sick children and averting disability.

The financial cost of delivering the research program is formed of two main areas. Firstly, there are the statistical analysis specialists who are required for the project to be fully and formally assessed, then there are the data collectors on the ground.

The data collectors in each hospital will build up as follows:

YEAR	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
GRADUATING STUDENTS	10	10	10	10	30	20	20	10		
NUMBER OF DATA COLLECTORS	10	20	30	40	70	90	110	120	120	120
DATA COLLECTORS FEES	48,000	96,000	144,000	192,000	336,000	432,000	528,000	576,000	576,000	576,000

The total cost of running the data collectors program, at a monthly fee of \$400 per data collector is:

\$3,504,000

In addition, fees for data management, statistical analysis and specialist review are estimated, over the duration of the project, to be a further: \$1,500,000

The total cost of the research project is therefore:

\$5,004,000

Advocacy and Political Will

A budget to allow the on-going maintenance of political will, regular reporting to the World Health Assembly throughout the decade, production of individual country reports, regular reporting to individual Ministries of Health, appointment of an African-based advocacy team and on-going production of project updates throughout the decade is estimated at:

\$4,000,000

Total Campaign Costs

The total costs of delivering the program and sustaining the data collection throughout the decade of the 20's is as follows:

Activity	Cost in USD
People - training new surgeons	\$9,216,000
Education - ensuring graduation	\$1,800,000
People - new anaesthesia providers	\$6,000,000
Education - ensuring safe paediatric anaesthesia	\$2,600,000
Infrastructure - creating new operating rooms	\$24,000,000
Research - evidence gathering on outcomes and impact	\$5,600,000
Advocacy - sustaining political will	\$4,000,000
Sub Total	\$53,216,000
Administrative - capped at 9% of project total	\$4,789,440
Total	\$58,005,440

Chapter Four

Next Steps

Partner Countries are invited to join the program by making the following commitments:

1. They will appoint a Children's Surgery Officer in the Ministry of Health to ensure the service has a direct access to the Ministry.
2. They will incorporate Children's Surgery in their National Surgical Plans, specifically identifying goals for the development of Children's Surgery.
3. They will employ the graduating surgeons and anaesthesia providers in public hospitals.
4. They will provide surgical consumables to teams providing childrens surgery in public hospitals.
5. They will maintain infrastructure investment and restrict its use only for paediatrics

In return KidsOR will make the following commitments:

1. Create 120 centres of excellence in Children's Surgery – spread across all partner countries.
2. Create an Operating Room capable of advanced Children's Surgery for every graduating surgical team in the public hospital where they will work.
3. Invest in the education and training of an agreed (with the MoH) number of surgeons and anaesthesia providers for each country.
4. Provide on-going support to those surgeons, anaesthesia providers and hospitals through biomedical engineer assistance for an agreed time.

Donors have a key role:

1. Become key partners in the development and delivery of a project capable of delivering generational change – preventing 10 million years of disability from ever happening.
2. Engage with particular projects and nations to help seed-fund the development of an entirely new, or at best fledgling, health service.
3. To sustain their investment throughout the project to ensure this generation of children, in each of the African countries participating, are the first to access the essential care they need.

Notes

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A registered charity in Scotland number
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