Global Surgery Implementation Showcase

Connection, Collaboration & Networking

www.theg4alliance.org
• This session will showcase opportunities for networking and collaboration to support scaling up of surgical, obstetric, and anaesthesia care at the national level.

• Interactive lighting round presentations from implementing organizations (NGOs and social enterprises) that will feature examples of successful collaborations supporting national surgical planning and implementation.
  - Participants will learn about different strategies for supporting implementation of NSOAP with an emphasis on collaboration and networking.
  - Open discussion and Q&A

We welcome your input and engagement!
Participating Organizations:

- International Federation of Surgical Colleges (IFSC)
- College of Surgeons of East, Central and Southern Africa (COSECSA)
- World Federation of Societies of Anaesthesiologists (WFSA)
- Indus Hospital Research Center
- Smile Train
- Assist International
- Safe Surgery 2020
- Arbutus
- Diamedica
- 3rd Stone Design
The G4 Alliance

OUR MISSION
The G4 Alliance is committed to advocating for the neglected surgical patient and is driven by a mission of providing a collective voice for increased access to safe, essential and timely surgical, obstetric, trauma and anaesthesia care as part of universal health coverage.

OUR VISION
Universal access to quality surgical, obstetric, trauma and anaesthesia care.

OUR GLOBAL TARGET
Safe Surgical and Anaesthesia Care for 80% of the World by 2030.
G4 Alliance Pillars

**ADVOCACY**
We galvanize collective advocacy and amplify the voice of our member organizations by engaging in advocacy at regional, national, and global levels. We also advocate on behalf of our members and their important contributions to surgical care.

**RESOURCE MOBILIZATION**
We work to ensure that sufficient resources and funds are mobilized to support safe surgical and anesthesia care for all. Financing safe surgical care will require collaboration by global and regional stakeholders to mobilize funding from multiple sources, including donor and domestic governments, multilateral organizations, corporations, philanthropies, foundations, and international financing institutions.

**POLICY IMPLEMENTATION**
We support the capacity-building of members and partner governments to incorporate essential surgical systems strengthening into national health planning, budgeting and implementation plans.
Our Member Network

Our Network
• 85+ Member Organizations
• Representing 300+ organizations
• 160 countries in 6 continents

Members Include:
• Academic Institutions
• Professional Societies
• Social Enterprises
• Non-profits/NGOs
• Public and Private Sector Organizations
A Track Record of Global Advocacy & Engagement
Implementation Showcase
The International Federation of Surgical Colleges: Supporting surgical training & education in sub-Saharan Africa

Robert Lane
President, IFSC
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109 Courses/Workshops in 16 countries in sub-Saharan Africa since 1999

- Basic Surgical Skills .................................................. 546
- Colorectal Skills........................................................ 26
- Management of Surgical Emergencies....................... 126
- Anastomosis Workshops.......................................... 72
- Train the Trainers (for appropriate Courses)............ 426
- Theatre Nurse Training Courses............................. 683

TOTAL TRAINED ................................................. 1,879
The advantage of our Courses is that a large number of participants can be trained at the same time and to the same standard despite their previous level of training or experience.

Train the Trainer courses always undertaken to provide sustainability.

This training is recognised by both COSECSA and WACS.

A full report is submitted after each event.

Feedback from both trainers and trainees has been highly commendable.
IFSC supports each country in having a dedicated Surgical Training Centre endorsed by the Ministry of Health.

IFSC Courses / Workshops are freely available to countries, in order to build surgical capacity particularly at Level 1 facilities.

IFSC can assist countries if there is not a clear understanding of existing data management capabilities and the ability to scale up processes for a NSOAP.
College of Surgeons of East, Central and Southern Africa (COSECSA)

Prof Pankaj Jani
President, COSECSA

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World Federation of Societies of Anaesthesiologists (WFSA)

Aaliya Ahmed
Programme Manager, WFSA

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WFSA Vision & Mission

Our Vision - Universal access to safe anaesthesia.

Our Mission - To unite anaesthesiologists around the world to improve patient care and access to safe anaesthesia and perioperative medicine.

How we do that - The WFSA is the foremost global alliance of anaesthesiologists, specialist physicians dedicated to the total care of the patient before, during and after surgery. We deliver our mission through programmes that are implemented together with national, regional and specialty anaesthesiology societies. We also work with other organisations that share our objectives, including, but not limited to, the World Health Organisation, governments, non-governmental organisations, specialist medical organisations, academic institutions, patient groups, hospitals, and industry.

Safe anaesthesia and perioperative care are essential for safe surgery, and we welcome partnerships aimed at strengthening health systems and achieving universal health coverage.
There are more than 140 societies in our Federation covering more than 150 countries
WFSA Workforce Map

• Data gathered for 153/197 countries representing 97.5% of global population.
• 77 countries reported a PAP density of <5; particularly low densities in African & SE Asia regions.
• NPAPs make up large part of global anesthesia workforce, especially in countries with limited resources. Even when NPAPs are included, 70 countries had a total anesthesia provider density of <5 per 100,000.
• Using current population data, over 136,000 additional PAPs would be needed immediately to achieve a minimum density of 5 per 100,000 population in all countries.
WFSA & NSOAP’s

‘Anaesthesia universally identified by all cadres as the most acute problem preventing safe surgical care’ (Tanzania NSOAP 2017).

‘1.1.1 Establish and strengthen the provision of quality essential and emergency surgical, anaesthesia, obstetric and critical care services at national, zonal, regional, district and health center levels’ (Tanzania NSOAP 2017).

• The WFSA’s flagship fellowship programme supports PAP’s from LMIC’s to gain specialist anaesthesia training.
• Our scholarships programme supports PAP’s from LMIC’s to build professional networks and make links with regional, global AP’s, industry and academics.
• Providing textbooks and online resources such as ATOTW, our virtual library and recently coordinating bursaries for an online ‘Essential Anaesthesia’ course.
• WFSA has expanded and enhanced the SAFE package of courses including global monitoring and improved evaluation and impact assessment.
‘3.1.1 Level 1 Facility 1. Establish and strengthen the provision of quality essential and emergency surgical services


SAFE Obstetric Anaesthesia has now trained 1,969 anaesthesia providers in 26 countries.

*Bangladesh, Benin, Burkina Faso, Colombia, Congo, Ethiopia, Fiji, Ghana, India, Ivory coast, Honduras, Kenya, Liberia, Madagascar, Malawi, Mozambique, Nepal, PNG, Rwanda, Samoa, Sierra Leone, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe*

SAFE Paediatric Anaesthesia has now trained 888 anaesthesia providers in 9 countries.

*Bangladesh, Benin, Cameroon, Ethiopia, India, Madagascar, Uganda, Zambia, Malawi, Kenya, Guatemala*
WFSA Collaborations & Partnerships

As the global federation of national anaesthesia societies, the WFSA has a wide reaching access to individual providers, societies and local & regional partners. All of the WFSA’s work is to support national surgical and anaesthetic strengthening, some current projects include...

- **Ethiopia** – Funded by Assist International to work with the ESA to roll out SAFE Obstetric Anaesthesia courses in 2 regions in Ethiopia, provide ‘Essential Anaesthesia’ kits and recruit ‘SAFE Fellows’ in country to provide ongoing physician led support. MoH have now funded 3 additional SAFE courses in Oromia with plans for other regions.

- **Telangana, India** – Working with the ISA to gather data on anaesthesia capacity at state level using AFAT, and implementing training and providing fellowships and scholarships in response. Developing a template for this project to be replicated.

- **Tanzania** – Working with SATA and key training institutions such as KCMC/BMC to roll out SAFE Obstetric anaesthesia courses and recruit SAFE fellows to mentor trainees. Working with behavioural scientists on a multi-country study in Nepal, Bangladesh, Zimbabwe & Tanzania to assess clinical behaviour change as a result of attendance on a SAFE course.

- **Kenya** - In 2016/17 WFSA worked with the KSA to roll out SAFE Obstetric Anaesthesia courses in each region (Central, NE, NW, Coast & Nairobi x 2) over half of all PAP’s were trained and the final course was held for the graduating class of CO’s at the KMTC.

- WFSA continues to expand our extensive fellowship programme, providing specialty training for PAP’s from LMIC’s with new fellowships this year in Mexico, Nigeria & Morocco.
Indus Hospital

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Director, Indus Hospital Research Center

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Smile Train

Mohamed Fakhreldin
Chief Programs Officer, Smile Train

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Our Global Footprint
Smile Train Training

**Surgeon**
- Hands-on microtraining
- Exchanges with other partners
- Fellowships
- Virtual Surgery Simulator

**Surgical Team**
- Smile Train Protocols & Guidelines
- Online Cleft Library
- Conference & workshop scholarships
- Nursing and Anesthesia Training Courses

**Cleft Community**
- Support for national cleft associations
- Community Health Worker Training
- Feeding Resources
- Speech Therapy Camps & Paraprofessional Training
Smile Train in Africa

Estimated Cleft Births and ST Surgeries

PLEASE NOTE: Cleft in developing countries is actively addressed by Smile Train and by other global and local cleft organizations and governments.
Thank You
Safe Surgery 2020

Erin Barringer
Interim Director, Safe Surgery 2020

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Safe Surgery 2020 envisions a world where everyone, everywhere has access to safe surgical care.

We bring together innovations, global expertise & local experience in 4 key areas:

1. We act as advocates and advisors as countries to conduct national surgical planning.
2. We develop and support cohorts of local surgical leaders who will transform surgery.
3. We test and scale innovations in workforce development.
4. We measure and share what works – and what doesn’t – to engage the global surgery community.
We are a multi-partner initiative and partner closely with country governments to bring about change

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Our work to date in Ethiopia

- **National Surgical Planning** to develop the Saving Lives Through Surgery (SaLTS) strategy
- **Workforce Development Innovations**, including anesthesia and BMET training
- **Innovative Infrastructure Development**, such as the development of a self-sustaining private-public partnership medical oxygen plant
- **Leadership Transformation Program** to spark transformation through team-based leadership training and ongoing mentorship
- **Monitoring and Evaluation** to support the FMOH to develop and use KPIs
Our impact to date in Ethiopia: 2 years. 10 hospitals. 650+ leaders trained.

- **527** Hospital staff trained on sterilization and infection prevention
- **130** Surgical leaders and mentors developed
- **10** new machines provided

**In the hospital...**

- **50%+** Increased volume of surgical services
- **1/3** Reduction of surgical mortality in six months
- **78%** Reduction in referrals

**In the community...**

- **2** New oxygen plans created via a public-private partnership for a medical oxygen plant

**In the country...**

- **1,000** more leaders will complete the leadership program via FMOH scale-up

Saving Lives Through Surgery
Collaborated with the Federal Ministry of Health to help develop national plan
Our work to date in Tanzania

- National Surgical Obstetrics and Anesthesia Plan (NSOAP) support for Ministry of Health and PORALG

- Plans to roll out workforce development innovations and leadership transformation program at facilities in Mara and Kagera regions to address critical challenges in order to enhance access and quality of surgical and anesthesia care
Arbutus

Elise Huisman
Co-Founder and Director, Clinical, Arbutus

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Vision
Safe Surgery for everyone, everywhere

Mission
Developing safe, affordable, and reliable surgical equipment for use in low-resource settings.
Measuring and improving access to orthopaedic implants and surgical tools
Phase I: Survey-based data collection
  • Baseline survey and data collection
  • Scope: COSECSA, AOAF network of surgeons

Phase II: Drill Cover training & implementation
  • Focus: a couple of specific hospitals
  • Intervention sites prioritized using survey baseline

Phase III: Comprehensive long-term monitoring
  • Follow-up training provided where needed
  • Outcomes measurement at select sites (if feasible)
Importance & Opportunities

Importance
1. Data to drive continued awareness & advocacy campaigns
2. Data to set priorities for equipment procurement / education / courses / workshops

Opportunities
• Country representatives
• Uniform methods
• Expanding to other surgical specialties
Our Approach

Committed to designing and manufacturing equipment for use in low resource settings that is affordable, economical and easily maintained locally.

Specifically designed and manufactured to perform in some of the most challenging environments around the world.

Providing free, ongoing after sales support for the lifetime of the product.

Working hand in hand with in-country partners to provide training, education and distribution.

For over 10 years education and training have been key components to providing lifesaving healthcare.

A commercial enterprise with a huge humanitarian heart.
Safe Anaesthesia and respiratory solutions for limited resource settings

- **Anaesthesia**
  - Glostavent Range

- **Oxygen Supply and Storage**
  - Reservoir System
  - Concentrators

- **Intensive Care and Pain Management**
  - Baby CPAP
  - Ventilators

www.diamedica.co.uk
Safe Anaesthesia for Somaliland
SANSOM

**Training**
- 3-day CME course
- 34 anaesthesia technicians
- First CME programme for anaesthesia in the country
- Focus on obstetric and paediatric surgical patient

**Data Collection**
- Tablets: Data collection, patient record keeping and anaesthesia library

**Equipment Kits**
- Training on equipment use and maintenance
SANSOM Anaesthesia Equipment Kits

Delivered and installed in 10 locations
Reducing Neonatal Mortality - Uganda

- Globally, neonatal mortality remains the major barrier to reducing under five mortality
- Nearly all neonatal deaths occur in low-income countries
- 39% of them occur in sub-Saharan Africa
- It is estimated two-thirds of these deaths could be prevented

Diamedica Baby CPAP used in 35 countries

Diamedica Baby CPAP awards:
- AAGBI Innovation Award
- Africa Healthcare 2018 Medical Technology Breakthrough of the Year
- Africa Healthcare 2018 Outstanding Contribution to Medical Technology

WHO: 8 Country programme

www.diamedica.co.uk
Staged implementation of a two-tiered hospital based neonatal care package in a resource-limited setting in Eastern Uganda

**BMJ Global Health Feb 2018**

**Location:**
- Mbale Regional Referral Hospital
- Serves 4.5m people in Eastern Uganda
- Has nearly 10,000 deliveries/year

**Strategy:**
- Used WHO Recommended Quality of Care Framework to build strategy for quality improvement
- 12 interventions were designed to improve infrastructure, equipment, protocols and training
- Implemented low cost hospital based neonatal care package over 18 months

**Results:**
- Neonatal mortality decreased from 48% to 21%
- Further reduction to 11%
- Recommendations: A dramatic impact on mortality can be made through modest and cost effective interventions
Mbale: Investment in Appropriate Technology for Neonatal Care

- **Lifebox**: Oxygen saturation monitoring

- **Diamedica**:
  - **3 Oxygen concentrators** installed with flow splitters (0-2.5l/min) to deliver to individual infants using nasal cannulae
  - **3 CPAP machines**, used not only for their robust and low cost nature but also for their ability to blend oxygen and air. Vital for minimising retinopathy

- **Brilliance**: phototherapy by LED
3rd Stone Design

Robert Miros
CEO, 3rd Stone Design

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3rd Stone Design is a product design, development and deployment company. We specialize in global health applications. Our capabilities run from concept design and front end product development, to detailed engineering and transfer to manufacture, to ultimate production, distribution and sale. We have products in use in 38 countries - 20 in Africa.

We collaborate with Global Health partners through design of new products, commercial development or refinement of existing products, and design of business structures to facilitate broad dissemination of technical solutions.
Examples of Global Health Devices developed by 3rd Stone Design. All products are intended for production at large scale and most have already achieved global impact.
Portable Colposcopy – A Current Focus

Pocket Colposcope
Success
• Radically redesigned colposcope enables improved care pathways and methods of examination.
• Dramatically reduced cost of device opens up markets closed to this technology previously.
• 8 clinical sites globally, gathered over 500 patients’ exam data in less than a year with first generation product.

Challenges
• To achieve maximum impact will require changes in care paradigms and staffing requirements.
  Multiple implementation partners needed for fast results.
Open Discussion

Connection, Collaboration & Networking