Sub-Saharan Africa has the most acute shortage of reconstructive surgical care in the world, with approximately one reconstructive surgeon for every 10 million people. Many countries in this region have never had a single plastic and reconstructive surgeon within their borders nor any tradition of this critical medical specialty.

**Common conditions for which reconstructive surgery is necessary to restore normal function include:**

- An accident or trauma from traffic accidents or burns
- A congenital condition such as missing digits, cleft lip and palates
- Reconstruction from cancer

**30%**

of the global burden of disease is due to surgical conditions

- **Three times** that of malaria, tuberculosis and HIV/AIDS combined
- **18 million** people die annually due to surgically treatable conditions
- Millions more suffer with preventable disabilities.

The issue is particularly acute in Sub-Saharan Africa, where:

- There is only 1 reconstructive surgeon for every 10 million people
- **93%** of the population lacks access to safe, affordable, and timely surgical care

ReSurge and the College of Surgeons of East, Central, and Southern Africa (COSECSA) — the largest surgical training institution in sub-Saharan Africa — are working together to increase access to safe reconstructive surgical care in the region.

**ReSurge**

50+ years of experience teaching and delivering safe reconstructive surgery

**COSECSA**

- 14 Sub-Saharan countries
- **6 of which** currently have plastic surgery training programs

**92%**

of the physicians trained remain in the region, combating "brain drain" and ensuring a sustained pipeline of reconstructive surgeons in Sub-Saharan Africa
In 2020, ReSurge partnered with COSECSA to launch the ReSurge International Program in Africa (RIPA)

RIPA combines ReSurge's 50+ year experience in teaching and delivering safe reconstructive surgery with new virtual training and visiting educator programs to enhance partnerships in Sub-Saharan Africa. It is a bold plan to train a new generation — and, in many countries, the first generation — of reconstructive surgeons through:

### Capacity Building

ReSurge is connecting world renowned experts in reconstructive surgery directly to local surgical teams in low- and middle-income countries.

- Programs like ReSurge's Surgical Team Training Trips provide essential hands-on training and facilitate long-term relationships between hospitals in the United States and partner institutions across Africa.
- Through Virtual Learning programs, ReSurge offers live streaming lectures from expert medical volunteers, along with a database of 175+ free lectures.
- The organization also hosts monthly live lectures for surgery and anesthesia for CANECSA (COSECSA's equivalent sister college for anesthesia), and quarterly case conferences.

### Direct Patient Care through the Surgical Outreach Partner Program

ReSurge identifies and trains early career surgeons over the course of their professional life. The organization is currently working with surgeons in five countries throughout Sub-Saharan Africa — Kenya, Mozambique, Uganda, Zambia, and Zimbabwe. ReSurge Medical Volunteers work directly with their local counterparts in these countries, helping them fill in gaps in capacity while training the entire surgical team to ensure patient safety at every stage of treatment.

### Academic Partnerships

In addition, ReSurge is helping to forge unique relationships between academic centers in the U.S. and surgical programs in each of the 14 COSECSA countries, increasing capacity and ensuring a more sustainable program. Thus far, partnerships have been established between:

- Stanford University & Parirenyatwa Hospital in Zimbabwe
- Johns Hopkins University & Kiruddu Hospital in Uganda
- Northwestern University & AIC Kijabe Hospital in Kenya
In 1999 when COSECSA was formed, plastics wasn’t originally part of the curriculum, not because the disease burden was not there, but because the capacity was not there. People prioritize loss of life specialties. Yet the quality of life is key.”

– Professor Godfrey Muguti
COSECSA President

**eLearning Centers**
During the COVID-19 pandemic, ReSurge transitioned to a virtual learning program. Many trainees logged on via cell phones resulting in burdensome data fees and making the free lectures cost-prohibitive. To mitigate this challenge, ReSurge created eLearning centers in Mozambique, Uganda, and Zimbabwe to provide reliable internet access and a dedicated place to learn and study. These centers were not only for reconstructive surgical trainees, but also nurses, anesthesiologists, and other clinicians across the hospital. This model is still in use today in these countries — with more in the works — as part of a hybrid virtual/hands-on learning approach.

**Pioneering Women in Reconstructive Surgery**
Through its partnership with SkinCeuticals, ReSurge is currently supporting seven women reconstructive surgeons in Sub-Saharan Africa, providing surgical training, leadership development, mentorship, and networking.

**Scholarships**

1 annual scholarship enabling one promising young surgeon to spend a year at a ReSurge training hub

3 one-month study exchanges allowing surgeons to spend time in a neighboring African country with a reconstructive surgery department where they can receive training and gain experience in reconstructive surgery

3 COSECSA exam scholarships, covering the travel costs and exam fees for surgeons sitting for their board certification exam
Creating COSECSA's first-ever comprehensive reconstructive surgery curriculum and lecture series

In 2021, ReSurge and COSECSA set an ambitious goal to develop a comprehensive reconstructive surgery curriculum and lecture series for physicians across the region.

**ReSurge Reconstructive Surgery Curriculum**

ReSurge Consulting Medical Officer, Dr. James Chang, along with ReSurge Medical Volunteers, developed the first-ever COSECSA-wide Plastic and Reconstructive Surgery Curriculum to standardize learning across all 14 countries in the region.

Through a comprehensive, online curriculum of 26 modules — each one developed by world class experts and delivered through the Royal College of Surgeons of Ireland’s School for Surgeons learning platform — this program addresses every aspect of reconstructive surgery. Importantly, the material is specific to the region and includes discussion of local cases. The initiative has benefited from the generosity of other partners including academic publisher Elsevier, which donated plastic surgery textbooks for the recent COSECSA graduates.

**Training Programs**

- Curriculum developed by 24 internationally renowned experts, covering 26 different technical topics
- 27 online lectures
- 407 participants in 2022
- 15 textbooks donated by Elsevier
- 3 pairs of Smart Glasses provided by Ohana One International Aid
- 19 African program directors attended a Train-the-Trainer session
- 14 trainees – the largest number ever – took the Board Certified Plastic Surgery Exam in 2022
A Train-the-Trainer Conference

In December 2022, ReSurge hosted reconstructive surgery program directors from across the region at its annual train-the-trainer conference. This platform provides an opportunity for these doctors — pioneers in reconstructive surgery in their respective countries — to convene in one place, discuss the overall field, best practices, and to share their experiences.

Standardization

Every reconstructive surgeon graduating from the surgical training program in the 14 COSECSA countries sits for a board certified exam. ReSurge is helping to standardize this intensive, two-day oral examination by drawing upon best practices from the American Board of Plastic Surgery. In addition, ReSurge volunteers worked with local surgeons to serve as examiners.

When ReSurge trains just one reconstructive surgeon, that surgeon will go on to treat 9,000 patients throughout their career. And that surgeon will train others to do the same.

ReSurge is working with each country to set up programs in the way that works best in their unique context. Together, ReSurge and COSECSA are collaborating to grow the programs in innovative and visionary ways.

ReSurge has the opportunity to support the first generation of reconstructive surgeons in many countries, which will have a ripple effect on trainees for generations to come, ultimately meaning more access to care for patients in the greatest need. Most importantly, people throughout the region will have access to life-transforming reconstructive surgery.

Meet some of the some of the RIPA surgical trainees and watch the program in action.