Mercy Ships:
Health Systems Strengthening in Sub-Saharan Africa
a floating hospital delivering programs to transform a nation’s surgical ecosystem

Mercy Ships is a global organization with the mission to increase healthcare delivery in developing nations. Through the deployment of our hospital ship, the Africa Mercy, Mercy Ships works with host nations to fill the gaps in healthcare systems while serving the immediate medical needs of their populations.

Along with a host of surgical projects, Mercy Ships provides educational programming for surgeons and other medical professionals.

In collaboration with local and international partners, Mercy Ships offers support to developing nations striving to make health care accessible for all.

In 1990, Mercy Ships began focusing program delivery in Africa with emphasis on countries ranked by the UN Human Development Index among the poorest nations of the world.

In this region, Mercy Ships has provided services in Senegal, The Gambia, Guinea-Bissau, Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin, Republic of Congo, South Africa and Madagascar. Mercy Ships has 16 national offices that help supply funds and volunteers.

In West Africa, people with obvious medical conditions often live in the shadows. Imprisoned by rejection, shame and loneliness. “Mercy Ships provides not only medical care, but love and acceptance.”

—Sarah Philips, Mercy Ships volunteer

a wider reach

over 50% of the world’s population lives within 100 miles of a coast

providing free care

tumors are removed, sight is restored, clefts are corrected, fractures are set, and more.

more lives saved

more than 79,000 surgeries have been performed onboard our ships since 1977
changing lives lasting impact

Since 1978, Mercy Ships has provided services and materials in developing nations valued at over $1.2 billion, impacting more than 2.5 million direct beneficiaries.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village Patients Treated with medical and dental procedures</td>
<td>622,000+</td>
</tr>
<tr>
<td>Life-Changing Surgical Procedures Performed</td>
<td>79,000+</td>
</tr>
<tr>
<td>Healthcare Professionals Trained in their field of expertise</td>
<td>36,650+</td>
</tr>
<tr>
<td>Healthcare Professionals Trained to train others</td>
<td>5,875+</td>
</tr>
<tr>
<td>Community Development Projects Completed</td>
<td>1,100+</td>
</tr>
<tr>
<td>Port Visits</td>
<td>587</td>
</tr>
<tr>
<td>Nations Visited</td>
<td>57</td>
</tr>
</tbody>
</table>

“I wish to thank all the volunteers on the ship who come from all over the world for their sacrifice and the comfort they have given…”

—Ellen Johnson Sirleaf, President of Liberia
Surgery is an indivisible, indispensable part of healthcare. — The Lancet Commission on Global Surgery

More people die due to lack of safe surgery than from TB, malaria and HIV combined. In 2010, 32.9% of global deaths resulted from conditions requiring surgery. Deaths from HIV/AIDS and TB were 5.04% and deaths from malaria and other tropical diseases were 2.5%.

Approximately 315 million surgical cases are performed globally each year. But, only six percent are done in low- and middle-income countries. **Five billion people around the world do not have access to safe, affordable and timely surgical and anesthesia care.** In low-income and lower-middle-income countries, access is particularly sparse. Nine of 10 people cannot access basic surgical care. As a result, many easily treatable conditions such as appendicitis, hernia, fractures, obstructed labor and congenital anomalies become deadly.

Many of these countries are facing a complex burden of infectious, maternal, neonatal and non-communicable diseases and injuries. Surgical and anesthesia care are vital to the treatment of these conditions and are fundamental to an efficient, responsive health system. **Reduction of death and disability centers on access to affordable, timely and safe surgical and anesthesia care.**

To save lives and prevent disabilities, an additional 143 million surgeries are required in developing countries. Today’s surgical workforce would need to double in 15 years—2.2 million more surgeons, anesthetists and obstetricians are needed.

Investing in surgical services is financially reasonable, life-saving and it promotes economic growth. To meet current and growing population demands, investment in resources for surgical and anesthesia care is critical. **Without urgent investment in surgical scale-up, lost output will cost developing countries an estimated $12.3 trillion between 2015 and 2030.**

---

1 All data cited above is attributed to The Lancet Commission on Global Surgery (www.thelancet.com)
few countries in Sub-Saharan Africa have functional healthcare systems

Limited educational opportunities constrain the number and skill level of medical professionals. According to the World Health Organization (WHO), while there is a shortage of all types of providers in developing nations, specialists including obstetricians, ophthalmologists and dentists comprise the most critical gaps.

According to a National Institutes of Health study, the 47 countries of Sub-Saharan Africa have an acute shortage of healthcare workers, the deficit amounting to 2.4 million doctors and nurses. There are two doctors and 11 nursing/midwifery personnel per 10,000 population compared with 19 doctors and 49 nursing/midwifery personnel per 10,000 for the Americas. In Europe, there are 32 doctors and 78 nursing/midwifery personnel per 10,000.

delivery of safe surgical care—essential, accessible health service for all

Access to surgical care is only part of the issue regarding need; safe, quality surgery is just as critical. Globally, an estimated 315 million operations are performed annually with an estimated mortality rate of 5-10% and complication rate of 3-17%. Worldwide, this equates to approximately one million people dead and seven million disabled per year. At least half of surgery-related harm is preventable.

The likelihood of an adverse event is even higher in low-resource settings. Of every 100 hospitalized patients at any given time, seven in developed countries and 10 in low-income countries will acquire healthcare associated infections (HAIs). Surgical care, in particular, can be associated with considerable risk of complications. In some parts of Sub-Saharan Africa, mortality for general anesthesia can be as high as one in 150. Simple, low-resource tools and training can help address these issues through skills improvements and enhanced teamwork amongst medical professionals.

In 2009, the World Health Organization (WHO) launched their 2nd Global Patient Safety Challenge, Safe Surgery Saves Lives. This initiative produced the Surgical Safety Checklist (SSC) designed to improve adherence to basic safety process and thereby improve quality of surgical care.

---

6 Ibid http://www.who.int/patientsafety/safesurgery/en/
delivery of safe surgical care at its center

To establish this critical foundation for health care on a global level, Mercy Ships delivers capacity-building healthcare education programs to reinforce sustainable care in Africa. These programs identify regional needs and work closely with local governments to establish initiatives that make a lasting difference.

Specifically, the WHO Surgical Safety Checklist and Lifebox Team Training provide instruction for participants at regional hospitals and assist in implementation of best practices and use of pulse oximeters to improve the quality of surgical care provided at respective facilities.

delivering quality programming to countries with struggling healthcare systems

For 38 years, Mercy Ships has been collaborating with local and global partners to transform the surgical ecosystem in the developing nations through an integrated program design of three pillars:

**Direct Medical Services:**
Free Surgeries
- Maxillofacial
- Plastic
- General
- Orthopedic
- Ophthalmic
- Obstetric fistula

**Training**
- Mentoring Healthcare Professionals
- SAFE Obstetric Anesthesia
- SAFE Pediatrics Anesthesia
- Essential Surgical Skills
- Primary Trauma Care
- Biomed Technicians Dental
- Sterile Processing
- WHO Surgical Safety Checklist & Lifebox Team Training

**Infrastructure Development**
- Facility Renovation
- Nutritional Agriculture
- Training Local Leaders
operational rhythm of Mercy Ships

Approximately 6 to 12 months prior to a ship’s arrival, a Mercy Ships team travels to a host country to build relationships and gather information regarding the needs of the healthcare system.

Typically, Mercy Ships arrives in a port city in August each year where we serve for a 10-month period. An Advance Team, which spends four to five months in the host country prior to the ship’s arrival, establishes the dockside area and the off-ship clinics utilized during the field service.

Mercy Ships works in partnership with host governments, local medical providers, and local and international NGOs to provide direct medical services, medical capacity building and infrastructure capacity building.

During each 10-month field service, **Mercy Ships provides an average of 2,000 free surgeries for adult and child patients; treats more than 18,000 at land-based dental and eye clinics; and provides holistic healthcare education to approximately 500 local healthcare professionals and 800 community leaders.**

Making this impact possible are our crew members who raise their own financial support. This international community of up to 1,400 volunteers annually can represent more than 40 nations.

Project evaluation is completed within 12-24 months after ship departure. A team spends two weeks on location reviewing and scoring the goals and outcomes of each project. Final reports include a detailed overview that highlights proposed versus actuals for direct services and financial data.
innovative approach with state-of-the-art delivery

The primary benefit of using a hospital ship versus a land-based facility is control of environment. Unlike a land-based clinic or hospital, a ship is not constrained by lack of adequate infrastructure such as electricity or water. The state-of-the-art hospital aboard the Africa Mercy can be delivered to areas of great need to fulfill the mission regardless of local infrastructure constraints such as power failures or unsanitary water, making it a sustainable delivery platform in the developing world. Additionally, Mercy Ships brings world-class equipment including access to computers, laboratories and diagnostic tools. As a result, Mercy Ships is able to offer first-world quality care to the poorest of the poor.

The ship-based hospital model of Mercy Ships also provides an excellent venue for training projects. Utilizing a mobile platform, the organization is able to bring capacity-building opportunities to Africa. This model provides professionals with a local option to participate in a high-quality education program. Furthermore, the proximity to the local setting allows the instructors to tailor education projects to the specific health needs in the country and the constraints of the local work environment. The instructors can demonstrate and teach correct technique while on board, but also adapt that information to the limitations of the local setting.

The ship offers a better platform to improve skills than simply training in the local hospital. As mentioned, the Mercy Ships hospital provides a dependable infrastructure not always available in the local health system. While participating in training programs in a Mercy Ships hospital, trainees can focus on the topics and skills taught in the program without the distractions of infrastructure limitations.

Most importantly, because Mercy Ships is not establishing a permanent facility in a host country, the temporary hospital is not competing with the local system. The respective ministries of health, NGOs and faith-based organizations understand that Mercy Ships will not be recruiting quality staff for employment on board the vessel. This mobile characteristic also helps avoid creating dependency on the services provided by Mercy Ships: the local healthcare delivery system must continue to provide services regardless of the ship’s presence.
scaling up for greater impact

To address the growing need for affordable and safe surgical care in developing nations, Mercy Ships is expanding its fleet. **The newest vessel, slated to enter service in late 2018, will carry on a long and proud history of serving the poorest of the poor around the world.**

Together with the *Africa Mercy*, the new ship will increase lives transformed and medical professionals trained by more than 2½ times current levels. It will feature expanded and flexible integrated educational and training capabilities, allowing us to dynamically balance acute immediate needs and the strengthening of existing local resources.

It is our goal that developing nations served by Mercy Ships will experience consistent, world-class medical care together with an increased and enhanced emphasis on capacity building.

---

**expansion of services; increase in operational funds**

With the addition of a new ship, an increase in operational funding is needed. Mercy Ships currently receives approximately $30M in contributions and grants each year. These gifts come through our 16 national offices worldwide. Rounding out our operational budget of $53,780,684 (2015) are gifts-in-kind, deputized staff fund raising and contributed services.

**By 2018, in order to support both ships, we must grow from $30M to $40M in donor contributions annually world-wide.**
In 2015, the US office contributed approximately $15.7M in funding to support Mercy Ships. To meet our growing programmatic and operational needs, we project the following US revenue requirements for the next three years:

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$19M</td>
<td>$22.6M</td>
<td>$26M</td>
</tr>
</tbody>
</table>

Our history of mission success and sound financial management, as well as our continuous, effective and experienced leadership, provides a framework for long-term organizational continuity and sustainability.

In addition, to a strong history of support for our mission through individual donors, we are committed to ensuring that our work continues with an on-going strategic effort of diversified fund development including:

- Expanding our corporate/foundation relationships
- Developing key partnerships with governmental institutions
- Enlarging our endowment
- Promoting planned giving opportunities
- Leveraging funds through matching and challenge campaigns

committed to transparency

The work of Mercy Ships has been a life-long driving force for Founder and President Don Stephens.