



Together with your help and that of our international volunteer crew, lasting transformation was brought to the nations of Madagascar and Benin **during 2016** through surgeries, medical aid, and tranformational development.

1,143



Volunteers

49



Nationalities represented by our crew

718,516



Total contributed hours by our volunteers

22,466



Dental procedures performed

1,551



Life-changing surgeries

1,704

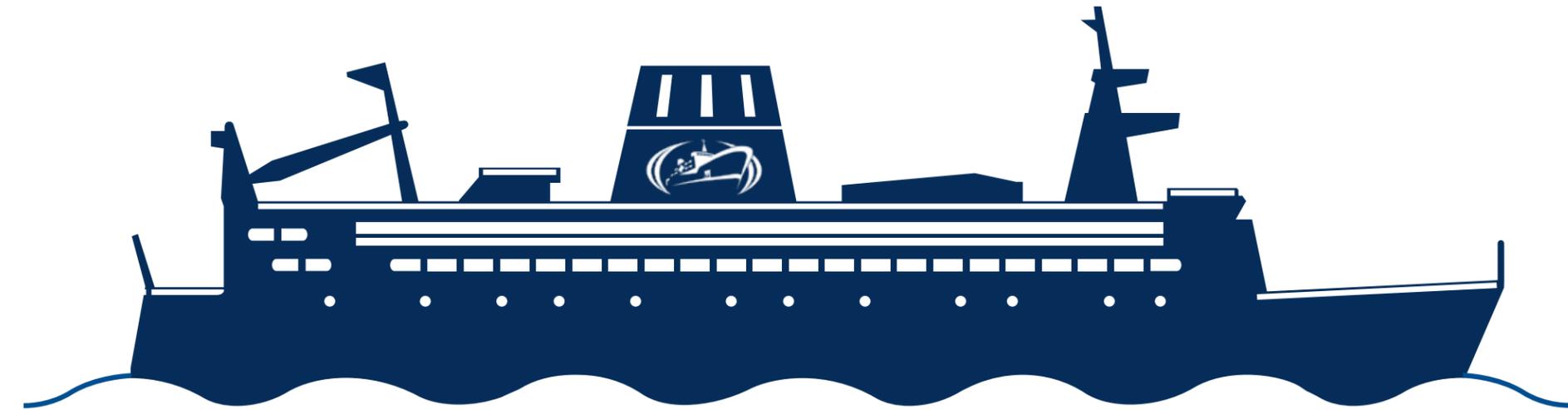


Healthcare professionals trained

6,917



Medical consultations

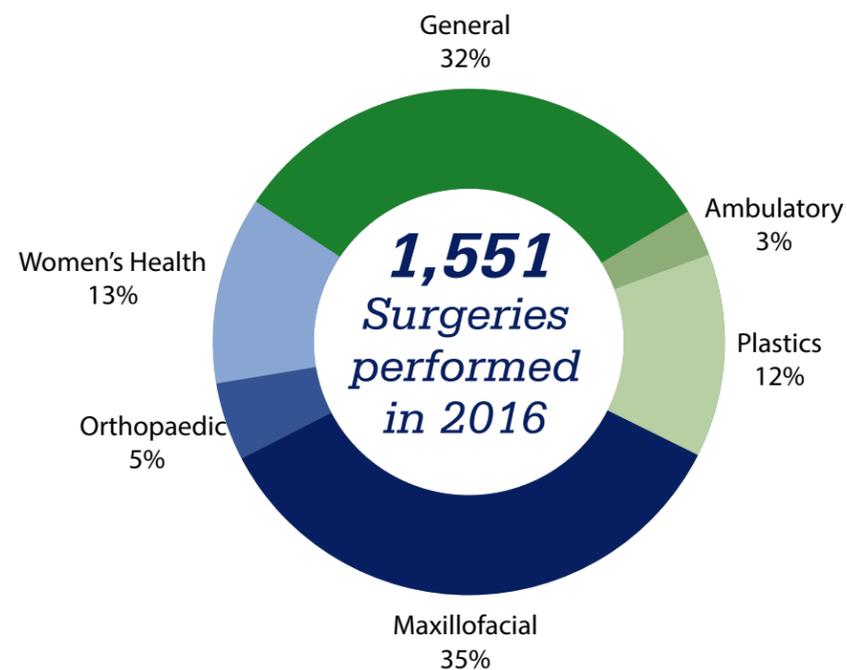


48,799

Direct beneficiaries in 2016



At Mercy Ships, **healing** often involves surgical intervention. But the healing process begins even sooner. It starts that very day we meet a new patient, when they are screened for treatment.



General Surgical Project

General Surgeries address conditions such as hernias, thyroid goiters, and soft tissue tumours.

Goals

- ▶ To improve the quality of life by surgically addressing paediatric congenital conditions, as well as adult environmentally-and-occupationally-acquired conditions
- ▶ To build local healthcare capacity

Project Results

- 494** General surgeries - primarily goiters, hernia repairs, and lipomas
- 5** Surgeons mentored in general surgery

Reconstructive Plastic Surgical Project

In Africa, many people still use open fires for cooking on a daily basis. These open flames are often a source of accidental burns. In nations where adequate healthcare is not readily available or affordable, burns often go untreated, resulting in severe skin and muscle contractures. Reconstructive Plastic Surgery addresses these needs through surgery, skin grafts, and physical therapy.

Goals

- ▶ To improve the quality of life of patients suffering from severe burns and other plastic reconstructive needs through life-changing surgeries, with the aim to restore function
- ▶ To build local healthcare capacity

Project Results

- 182** Plastic reconstructive surgeries
- 2,885** Hand, occupational, or physical therapy sessions for plastic reconstructive patients
- 6** Plastics nurses mentored
- 2** Surgeons mentored in plastic reconstructive surgery

Maxillofacial Surgical Project

Oral and maxillofacial surgery focus on three main areas:

- Children with congenital abnormalities, such as cleft lip and palate or an encephalocele (when the lining of the brain protrudes from a baby's skull)
- Facial deformities caused by a bacterial infection called noma
- Tumours of the head and neck, normally benign and very large

Goals

- ▶ To improve the quality of life of patients suffering from maxillofacial deformities through life-saving and life-changing surgeries
- ▶ To build local healthcare capacity

Project Results

- 538** Maxillofacial Surgeries (including 156 cleft lip and palate surgeries)
- 13** Maxillofacial nurses mentored
- 6** Surgeons mentored in the maxillofacial surgery



Ambulatory Surgical Project — *New in 2016*

Throughout previous field services, surgical assessment teams witnessed a significant number of patients with small tumours and minor surgical needs that do not warrant surgery under general anaesthesia. However, since patients do not have access to or are unable to afford minor surgeries, some of these conditions may progress to life-threatening conditions.

Ambulatory surgeries took place one day per week onboard the *Africa Mercy*, using surgeons already serving on the vessel. Patients underwent their procedure under local anaesthetic in the operating room. Afterward, patients returned to the Day Case Unit before being discharged on the same day. Follow-up care took place at Mercy Ships Outpatient Services.

Goals

- ▶ To improve the quality of life by addressing minor conditions under local anaesthetic through ambulatory surgeries

Project Results

- 47** Ambulatory surgeries



Orthopaedic Surgical Project and Ponseti Method Project

Due to time constraints of the ship's schedule, the focus is on paediatrics because the malleability of children's bones makes recovery much quicker.

The Ponseti Method is the "universal standard" in correcting clubfoot. It is a primarily non-surgical process, involving manipulating and regular casting to slowly correct clubfoot. It typically requires weekly cast changes for approximately 4 to 6 weeks.

Along with the casting process, a simple, small surgical procedure called a tenotomy is required to cut the Achilles tendon. It is performed with a local anaesthetic and does not require stitches.

Afterward, the patient is put back in a cast for three weeks for the tendon to heal in an ideal position. To maintain the correction, patients typically wear foot braces for 3 to 4½ years.

Mercy Ships collaborates with local clinics and providers to ensure long-term care, support, and the provision of braces.

Goals

- ▶ To improve the quality of life of patients suffering from:
 - orthopaedic deformities
 - neglected orthopaedic trauma
- ▶ To improve the quality of life for children with clubfoot
- ▶ To train local doctors, brace-makers, and healthcare workers in Ponseti Method skills
- ▶ To build local healthcare capacity

Projects Results

- 79** Orthopaedic surgeries
- 1,250** Physical therapy sessions
- 23** Patients treated for clubfoot with the Ponseti Method
- 7** Ward healthcare workers mentored in the Ponseti Method
- 1** Surgeon mentored in the Ponseti Method



Infrastructure Development in Madagascar

Mercy Ships infrastructure improvement projects include renovations at local hospitals and clinics. Mercy Ships personnel provide project management, using local construction crews. In 2016, we made a major investment in the Centre Hospitalier Universitaire Toamasina (CHUT) in Madagascar. Renovations included:

- Improved power source for operating room block
- Improved septic system
- Repair of surgery ward roof
- Repair of water distribution system
- Improved roads and sidewalks
- Renovations of paediatric and ICU Departments
- Equipment for the Operating Rooms, paediatric and ICU Departments

“The medical training and capacity building that Mercy Ships provides leverages our time in a country to leave a lasting and sustained impact of the healthcare systems of the countries we visit .”

—*Dr. Peter Linz*
International Chief Medical Officer

When A Plan Comes Together ...

Capacity-building programs and renovation projects combined in a wonderful way at the Centre Hospitalier Universitaire Toamasina (CHUT). We watched hope take shape holistically, leaving the entire healthcare delivery system of Madagascar much stronger. The three key elements that came together were healthcare training, renovations, and equipment donations.

CHUT was built between 1975-1980, and the hospital treats about 13,000 patients per year. It provides surgery, emergency, labor and delivery, and neonatal care. Like many African hospitals, it struggles with lack of training, equipment, and personnel.

By working with designated departments in the hospital, Mercy Ships focused training, renovations, and equipment procurement in the best way to reinforce the quality of the hospital's services. The project included renovating the operating bloc, improving the power source, repairing the water and septic system, improving walkways and roads for patient safety, training maintenance personnel, training biomedical technicians to keep medical equipment in working order, and providing operating room equipment. These efforts bolstered Mercy Ships training for surgeons, nurses, anaesthesia providers, and sterile processing technicians, also at CHUT. The result? Better healthcare delivery in Madagascar.



Dental Care and Treatment

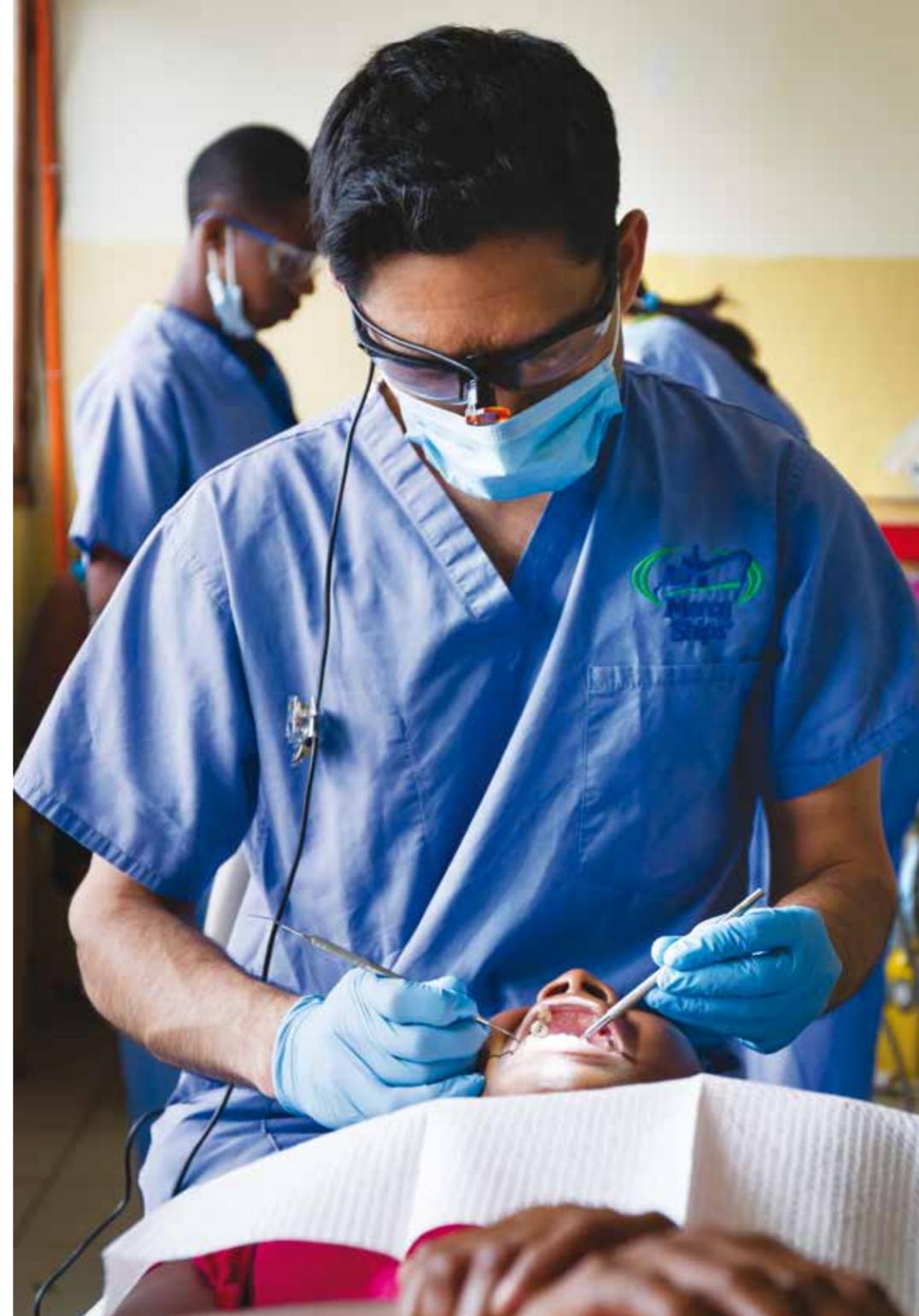
Dental projects in Madagascar addressed acute dental needs, provided preventative and restorative treatments, and provided basic oral health education at the dental clinic and in primary schools.

Goals

- ▶ To reduce the incidence of dental disease by:
 - providing preventative and restorative treatments such as restorations, extractions and cleaning
 - providing basic oral instruction to patients and caregivers waiting at dental clinics, and to students and teachers in primary schools
- ▶ To build healthcare capacity

Project Results

- 22,466** Dental procedures
- 11,755** Instructed in basic oral health
- 9,350** Unique dental patients seen
- 11** Day-crew trained to serve in various roles in clinic
- 3** Dentists mentored in Benin



Obstetric Fistula Surgery

Physical injury ... emotional trauma ... isolation. These are the results of obstetric fistula, a condition caused by obstructed labor. Often the baby is stillborn, the woman becomes incontinent, and many times she is unable to have more children. The good news is that Mercy Ships provides free surgery that restores the lives and self-esteem of these women.

Estimates show that Madagascar has approximately 2,000 new fistula cases every year. With little medical care available across the nation, the number of women affected by this shaming condition increases at an alarming rate. This need greatly influenced our operating room schedule for Madagascar 2015/2016, during which we scheduled Women's Health surgeries for 31 weeks.

A very special Dress Ceremony celebrates successful obstetric fistula surgery and recovery, and each woman is given a colorful new dress to signify her restored life and renewed hope.

Goals

- ▶ To improve the quality of life for patients suffering:
 - obstetric fistula
 - prolapse
 - other gynecological conditions
- ▶ To build healthcare capacity

Project Results

- 211** Corrective surgeries (199 were obstetric fistula repairs)
- 16** Ward nurses trained
- 4** Surgeons mentored



Medical Capacity-Building Projects

Medical Capacity-Building Projects impart knowledge and skills, while modeling and encouraging compassion and a professional work ethic. These projects incorporate one-on-one mentoring opportunities and internationally recognized courses for groups, held in the *Africa Mercy* hospital or in conference venues onshore.

“Our desire is to come alongside and say, ‘You are doing an amazing job with what you have. Let’s see if we can make it even better.’”

— *Krissy Close*
Medical Capacity-Building Project Manager



Goals

- ▶ To impart knowledge and skills in order to affect transformational development.
- ▶ Select participants in the training-of-trainers portions who have the skills to train others in the course material.

Projects Results

Healthcare Providers Trained Through Courses

- 713** WHO Safe Surgery Checklist
- 265** Mental Health Course (including 128 in Cameroon)
- 135** Primary Trauma Care + 30 in Training of Trainers
- 131** Essential Pain Management + 11 Training of Trainers
- 118** “SAFE” Obstetric Anaesthesia + 29 Training of Trainers
- 117** “SAFE” paediatric Anaesthesia + 18 in Training of Trainers
- 64** Improving Surgical Care (various courses)
- 59** Sterile Processing Courses
- 33** Essential Surgical Skills + 6 in Training of Trainers
- 33** Medical Leadership
- 20** Newborn Resuscitation Courses for Nurses
- 17** Ponseti Method Courses
- 8** Regional Anaesthesia Course
- 6** Biomedical Technicians
- 4** Helping Babies Breathe
- 1** Dental

Healthcare Providers Mentored

- 16** Ward Nurses for Fistula Care
- 14** Nurse Anesthetists – onboard the *Africa Mercy*
- 13** Maxillofacial Ward Nurses
- 7** Healthcare workers for Ponseti Method
- 6** Maxillofacial surgeons – onboard the *Africa Mercy*
- 6** Paediatric Ward Nurses
- 6** Plastics Ward Nurses
- 5** General surgeons – onboard the *Africa Mercy*
- 4** Surgeons mentored in obstetric fistula surgery – onboard the *Africa Mercy*
- 4** Emergency Room Nurses
- 3** Dentists – at our local clinic
- 2** Plastic Reconstructive Surgeons
- 2** Operating Room Nurses – onboard the *Africa Mercy*
- 2** Ophthalmic Nurses mentored
- 1** Sterile Processing Technician – at the local hospital and onboard the ship
- 1** Surgeon in Ponseti Method

Hospital Counselling

The Hospital Counselling Team facilitates the following for patients onboard the *Africa Mercy*, at the HOPE Center, and at the Obstetric Fistula Clinic:

- Counselling sessions for patients and their caregivers to address emotional, psychological, and social issues.
- Enriching opportunities including weekly ward focused activities.
- Mind-stimulating activities such as play therapy, arts and crafts activities.



Goals

- ▶ To strengthen the ability of Mercy Ships to affect whole-person care, focusing on patients' social, psychological, emotional and physical needs.

Project Results

- 3,914** One-on-one counselling sessions for patients and caregivers
- 738** Materials in Malagasy or French provided at request of patients
- 216** One-on-one HIV counseling sessions
- 20** Day-Crew trained to serve in the ship hospital, the HOPE Center, and the Obstetric Fistula Clinic



"Being here has taught me what this is really about — serving others and humility. It's why we are here: to help other people and put them before us."

Michel Pullen | Physical Therapist



Palliative Care

Some who seek medical help from Mercy Ships are not eligible candidates for surgery because of inoperable and often terminal conditions.

They are often rejected by their communities because local cultures view these conditions as a curse.

The Palliative Care Team reaches out to patients and their families, providing in-home visitations to encourage them, provision of pain relief medications, instruction for caregivers, dressings for wound care, and counselling for patients and caregivers.

Goals

- ▶ To show the love of God by giving practical care and support to individuals and families suffering from terminal illness.

Project Results

- 523** Home Visits
- 134** Family trained in palliative care and wound care
- 38** Palliative care patients

Community Teams

Community Teams provided the crew with additional service opportunities during their off-duty hours, primarily evenings and weekends.

All of these site visits were done in partnership with local organisations, including orphanages, a children's home, a home for the elderly, a school for the deaf, a school for the handicapped, a prison, and the HOPE Center.

Goals

- ▶ To provide support and strengthen community support for those we come to serve.

Project Results

- 6,209** People reached
- 267** Sites visited
- 18** National partners

Infrastructure Development in Benin

Improvement projects in Benin included:

- Renovation of facility at Centre de Santé de Zogbo for use as a Dental Clinic
- Renovation of facility at Centre de Santé de Missessin for use as the HOPE Center

H.O.P.E. Center —Hospital Out-Patient Extension

The HOPE Center is a non-medical facility that supports the hospital onboard the *Africa Mercy*. Its aim is to free up precious bed space in the hospital ward on the ship, enabling more life-changing surgeries to take place. Our patients and caregivers usually come from outlying areas and stay with us after their surgery until no further medical intervention is required. The HOPE Center provides housing for patients and caregivers in a secure location near the ship. After surgery, it offers a safe and clean environment that promotes effective recovery, while maintaining easy access to the ship for follow-up care. It provides a warm, welcoming atmosphere where patients can feel relaxed and at home.

Goals

- ▶ To optimise the capacity of hospital surgical outputs by improving patient care in and out of the ward.
- ▶ To increase medical infrastructure by providing a renovated building for use after the ship leaves port.



Nutritional Agriculture Course —Food for Life

Good nutrition is essential to good health. The Mercy Ships Nutritional Agriculture Course trained agriculturalists in Madagascar. The course included both classroom and hands-on instruction, as well as training in food transformation. After 21 weeks of training, the new trainers returned home to set up their own agriculture training program. As the knowledge spreads, food supplies will increase, diets will improve, and people will be healthier!

Goals

- ▶ To increase farming capacity and provide hands-on training for agriculture workers at a local orphanage

Project Results

- 34** Projects - Training in nutritional agriculture in Benin and Madagascar
- 5** Orphanages - Training workers and community farmers

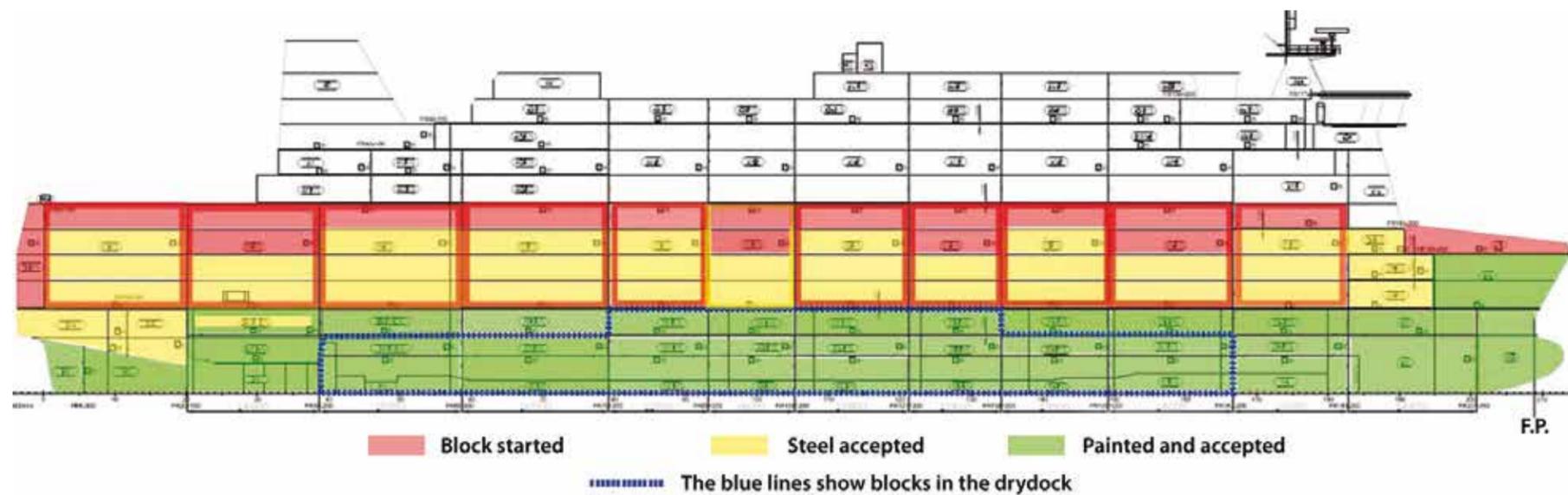


A Second Hospital Ship

We will soon launch a second hospital ship which will double our capacity to serve a continent.

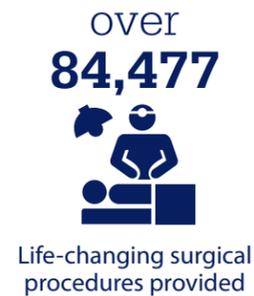
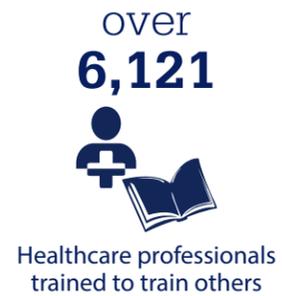
The new ship will contain six operating rooms, an ICU, clinical lab, radiology and pharmacy services, as well as 199 hospital beds. This ship will have increased hospital space making it better suited to training healthcare professionals and building capacity of the host nations we serve.

2016 saw encouraging progress on the construction of the new ship as big steel building blocks were assembled. 60% of the total steel for the ship has been cut. The shell of the ship is constructed and assembled block by block. So far, 81 blocks have been accepted, 60 have been painted, and there will be 267 blocks in total. A diagram of the updated block progress is shown below.



Since 1978

For **nearly 40 years**, Mercy Ships has been bringing hope and healing to those in need by providing services and materials in developing nations valued at **over \$1 billion** and impacting more than **2.61 million direct beneficiaries**.



Since 1978, Mercy Ships has impacted **over**
2,611,363
direct medical beneficiaries