

Anaesthesia on board Mercy Ships in Africa

It is estimated that 16.9 million lives globally are lost each year from conditions requiring surgical care - more than 32% of all global deaths, according to The Lancet Global Surgery 2030 Report¹.

Operating in Sub-Saharan Africa, Mercy Ships uses hospital ships to improve access to safe, affordable and timely surgery, and whole-person care in low-income countries.

The international non-governmental organisation undertakes work focused in three areas; direct medical services during a 10-month field service with a hospital ship in port, medical capacity building and health systems relationship development.

Hospital ship operating theatres

In May, Dr Rebecca Brinkler stepped from her role of Anaesthesia Specialist at Waitemata into a two-week volunteer tour-of-duty as one of three anaesthetists aboard the Africa Mercy, docked in Dakar, Senegal.

Dr Brinkler was impressed with the high level function in the services available in the ship-board maxillofacial and general surgery theatres she worked in.

“The resources within the theatre were better than I expected. We had access to difficult airway equipment such as videolaryngoscopes and fibreoptic scopes, extensive monitoring, a wide range of drugs were available and there was post-operative Intensive Care Unit capacity, if needed. I’ve worked in low- and middle-income countries in the past that were much more rustic, but these theatres didn’t feel much different to home.

“I was particularly impressed with how the team briefings worked on board. Everywhere I’ve worked uses the WHO Surgical Safety Checklist, but it was done really well on the ship. Perhaps it’s because you’ve got so many new people, you’ve really got to be thorough.”

“We specifically sat down for the team briefing in the morning, and took our time over it. We went through every patient; exactly what the surgeons were going to do, what they needed from the anaesthetist, the post-op plans and medications in detail - for example, non-steroidals, tranexamic acid infusions and antibiotics. I’ve never worked anywhere that the Checklist has been covered with such detail. This helped me because I was new to the environment. I felt more confident about what I was doing, it enhanced teamwork, made everyone more approachable and developed that important rapport.”

Volunteer service highlights

Patient rounds the night before surgery was an unexpected yet surprisingly significant on-board duty for Dr Brinkler.

¹ [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)60160-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60160-X/fulltext)



(Left to right) Africa Mercy anaesthetists Dr Rebecca Brinkler (New Zealand/UK), Dr Maciek Kruzynski (Poland), Dr Andrea Schlüter (Germany) and nurse anaesthetists Loveline Ndashi (Cameroon) and Josefin Lundstrom (Sweden).
Photo credit: Mercy Ships

“At home, we often only see patients on the day of their surgery, and you always feel a time pressure to get starting on the operating list. On the ship, patients were admitted to the ward the night before. I could take my time discussing their anaesthetic with them, with the assistance of fantastic local interpreters. I prescribed any pre-meds needed for the morning. It gave me time to make my plan, or discuss with colleagues if it was likely to be complicated.”

She adds, “A surprisingly pleasant part of the job was the on-call shifts, which were shared between the three anaesthetists. There are no acute theatres on board, but in case anything occurs with a patient on the ward someone always remains available on the ship outside working hours. There’s a little pool on the top deck and a library on board, so I think they were the best on call shifts I’ve ever done!”

Patients with extreme conditions made anaesthetic challenging

Describing the cases as similar but different from home, she explains, “Pathologies were at a more advanced stage I usually see when we are operating. For example, the lipomas and the facial tumours could be quite large, and children with cleft lip and palate were often older than I’ve seen operated on at home. I encountered conditions I’ve never seen before, such as flaps for the treatment of Noma. I enjoyed the experience and the challenge of this work.”

“There were three anaesthetists; one in each of the two open theatres, plus an anaesthetic supervisor. For more complex cases it was great to be able to call on that extra pair of hands. The supervisor, who had much more experience working in the ship environment, was a reassuring backup.”

The most significant learnings for Dr Brinkler came through sharing techniques and ideas with her international colleagues. “Those conversations are when you pick up tips from other people, and hopefully give them some tips as well. Sharing knowledge is one of the main things that Mercy Ships is trying to achieve in the countries it partners with.



Dr Rebecca Brinkler volunteered her anaesthesia skills for on board the Mercy Ship Africa Mercy in Dakar, Senegal. Photo credit: Mercy Ships.

Dr Rebecca Brinkler is from the UK where she studied medicine in Leeds. She completed her anaesthetic training in North London where she worked as a consultant before moving to New Zealand in 2021.

Multiplying anaesthesia capacity in Africa

Dr Brinkler was on board the Africa Mercy when the new Mercy Ships surgical training ship Global Mercy arrived alongside; sailing into an African port for the first time. She says the vessel's purpose is impressive - to strengthen the medical capacity of the African nations the charity serves through speciality training courses, mentoring and the sharing of surgical-related skills.

"I knew Mercy Ships went in to different nations with the ships to provide surgeries, but I didn't realise how long the commitment was to each country. Of the five-year engagement with a country, the ship is in port providing surgeries for 10

About Mercy Ships

Global health for the last two decades has focused on individual diseases, while surgical care in low-resource countries has not received the attention it needs.

Mercy Ships is an international faith-based organisation that operates hospital ships to deliver free, world-class healthcare services, medical capacity building, and health system strengthening to those with little access to safe surgical care. Since 1978, Mercy Ships has worked in more than 55 countries, with the last three decades focused entirely on partnering with African nations. Each year, volunteer professionals from over 60 countries serve on board the world's two largest non-governmental hospital ships, the Africa Mercy® and the Global Mercy™. Professionals such as surgeons, dentists, nurses, health trainers, cooks, and engineers dedicate their time and skills to the cause.

Mercy Ships has offices in 16 countries, including New Zealand and an Africa Bureau.

For more information, visit mercyships.org.nz

months. But that is only a part of the time that Mercy Ships teams are working in the country. A lot of medical capacity building is being undertaken on either side of the ship visit."

"It's all very well us coming in and operating on hundreds of people, but the next day there's going to be just as many people still needing an operation. If there still isn't a surgeon, an anaesthetist, a theatre team, lab team and sterilising available, it doesn't solve the problem."

"It was great to see Mercy Ships make the medical capacity building programme a priority. The only thing that's going to improve access to surgery for the majority in Africa, is improving that capacity across the continent. I hope to return to help Mercy Ships in theatres and with their SAFE anaesthetic education courses in the future."

The Lancet Commission on Global Surgery² found that countries with fewer than 20 specialists (surgeons, anaesthetists, obstetricians) per 100,000 population had lower surgical productivity, higher maternal mortality and overall worse health outcomes. This specialist surgical workforce density is the target for all countries to achieve by 2030, which requires training 1.27 million additional specialists worldwide. The latest statistics indicate Senegal has 1.03 specialists per 100,000³.

More about volunteering with Mercy Ships at www.mercyships.org.nz/make-your-mark/

2 <https://www.thelancet.com/commissions/global-surgery>

3 <https://www.ceicdata.com/en/senegal/health-statistics/sn-specialist-surgical-workforce-per-100000-population>



Doubling the impact, the Global Mercy joined the Africa Mercy in Dakar, Senegal. Photo credit: Mercy Ships



Paediatric anaesthesia courses are provided by Mercy Ships to strengthen local medical capacity. Photo credit: Mercy Ships