

Riding the waves to bring ophthalmic hope

Have you ever considered what it takes to set up a brand-new hospital? What about restarting an ophthalmology programme in a post-Covid world? How about doing both on a ship? Ella Hawthorne boarded the Global Mercy, the world's largest seafaring civilian hospital, to help do just that. She shares her experience here in the first of two reports for NZ Optics.

I'D WANTED TO be involved in international aid from a young age, which led me into healthcare, specifically optometry. After years of hoping and planning, I was invited to join the Global Mercy team in January 2023, volunteering for six months as the ophthalmic team manager. I had an incredibly steep learning curve, getting orientated within the organisation while stepping into a role left unoccupied for three years during the pandemic.

Mercy Ships brings hope and healing to the world's under-served poor, focusing on delivering safe, affordable and timely surgical care to sub-Saharan Africa. Since more than 40% of the world's population lives within 100km of a coast, Mercy Ships offers an effective way to deliver free surgery. Specialties include paediatric orthopaedic, maxillofacial, burns and reconstructive plastics, women's health and ophthalmic surgery. As well as providing onboard medical care, we strengthen the local healthcare systems through training and mentorship of local healthcare providers. This offers a more sustained and broader impact than we could ever hope to provide through direct patient care alone.

According to the World Health Organization's 2019 World Report on Vision, while there have been substantial increases in cataract surgery rates in low- and middle-income countries, the combination of population growth and an ageing population means the number of adults affected by cataracts is increasing. The Mercy Ships Ophthalmic Programme focuses mostly on dense, visually significant cataracts, ideally removing people from being classified as cataract blind (visual acuity of $\leq 6/60$). The secondary focus is on pterygium removal, with consideration of tropia, ptosis, evisceration and enucleation surgery, as required.

Overcoming obstacles

I arrived in Senegal, West Africa, ahead of the ship's arrival, to work with the patient-selection team. Working alongside translators, we screened more than 1,100 patients over five days in health centres around the capital of Dakar. A bit of high-school French and a few basic greetings in Wolof (a Senegalese dialect) helped me quickly build rapport, resulting in huge smiles and laughter.



Global Mercy docked beside Africa Mercy in Dakar, Senegal, and (right) Ella Hawthorne

The challenges that come with working in the field, like exhausting work over very long days, were heightened by sub-standard lighting for vision testing and ocular health assessments. We saw some incredibly dense cataracts, with vision of only hand motion or light perception being more common than not. Unfortunately, not everyone is a good surgical candidate, which meant difficult compassionate conversations, saying no to people who were hoping for a miracle. Sadly, we cannot help everyone.

Though it was a hard first week, each person who stood in front of me was a reminder of our work's potentially life-changing effects.

A new chapter of hope

I barely had time to then gather my thoughts before I found myself unexpectedly flying to Sierra Leone for advance work for the next field service in Freetown, beginning in September 2023. With a population of 8.4 million, Sierra Leone has just six ophthalmologists. It was a privilege to discuss how we could complement the country's national ophthalmic programme with its leading ophthalmologists and Ministry of Health and Sanitation representatives. I hope we can encourage further development in the programme, which has taken substantial steps forward in recent years.



I returned to Dakar in time to watch the *Global Mercy* dock for her inaugural surgical field service. It was a special moment, knowing how many lives will be transformed on this floating hospital. The anticipation and excitement on board grew as we spent a few weeks preparing for the arrival of the vessel's first patients. I was then joined by the rest of the eye team: an optometrist, an ophthalmic technician, nurses and the wonderful Senegalese day crew who provided essential translation and helped run the clinical spaces. They received a crash course in all things eyes, including a lesson in low-vision guiding, inspired by our blindfolded trips up and down the stairs at the School of Optometry and Vision Science at Auckland University. It was a joyous moment for us all when the day crew

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