



Senegal

2019-2020

Final Field Service Report

Message from Mercy Ships CEO

The Senegal 2019-2020 field service held great significance to Mercy Ships. It was our first time back to serve the people of Senegal since 1994, when the crew of the *Anastasis* served in Dakar. While our field service was cut short due to the COVID-19 pandemic, I am very pleased with the progress made during the eight-month stay in Dakar. Although we were not able to stay through June, we were able to meet or exceed the agreed upon goals for the field service.

Below are the highlights:

- **1,407 life-changing surgeries** were performed
- **5,591 dental patients** were treated
- **87 people** participated in **mentoring**
- **1,199 healthcare professionals** participated in medical capacity **training courses**
- **Over 80%** of the non-ophthalmic surgical patients were from the **13 regions of Senegal**, excluding Dakar, which met the request of H.E. Macky Sall

Our field service would not have been so successful had it not been for the vision and leadership of Mercy Ships International Board

of Directors along with the leadership of the President of Senegal, H.E. Macky Sall, and Abdoulaye Diouf Sarr, Minister of Health and Social Action. In addition, I wish to thank the remarkable Day Crew who worked alongside the crew living onboard the *Africa Mercy*. They not only served during the entire field service but they worked countless hours to support the crew through a rapid pack-up due to the COVID-19 alert.

We look forward to the time when once again Mercy Ships can sail into the port of Dakar, Senegal, to continue providing hope and healing to the wonderful people of Senegal.



Tom Stogner
Mercy Ships
Chief Executive Officer



Mission

Mercy Ships follows the 2,000-year-old model of Jesus, bringing hope and healing to the world's forgotten poor.

Vision

Mercy Ships uses hospital ships to transform individuals and serve nations one at a time.

Values

Following the model of Jesus, we seek to:

- Love God.
- Love and serve others.
- Be people of integrity.
- Aim for excellence in all we say and do.



Abdoulaye Diouf Sarr (top), Minister of Health and Social Action, and First Lady of Senegal Marieme Faye Sal (bottom, with *Africa Mercy* Managing Director Warrie Blackburn) welcomed the *Africa Mercy* in Senegal.



Senegalese delegates visit the *Africa Mercy*.

Message from the Managing Director

My Mercy Ships career began just after the *Anastasis* completed the first field service in Senegal. It wasn't until 25 years later that a Mercy Ship would return to Senegal, and we were reminded again how this beautiful nation came to be known as the land of *Teranga*. The crew of the *Africa Mercy* were able to experience the extraordinary hospitality of the Senegalese people through our local partners, day crew, participants, and patients.

We were thrilled at the opportunity to partner with the Ministry of Health and Social Action and Senegal's talented healthcare workforce to bolster a medical system that is exemplary in so many ways. Our partners in the Port of Dakar, the diplomatic corps, the civil society, and other charities have been instrumental in the success

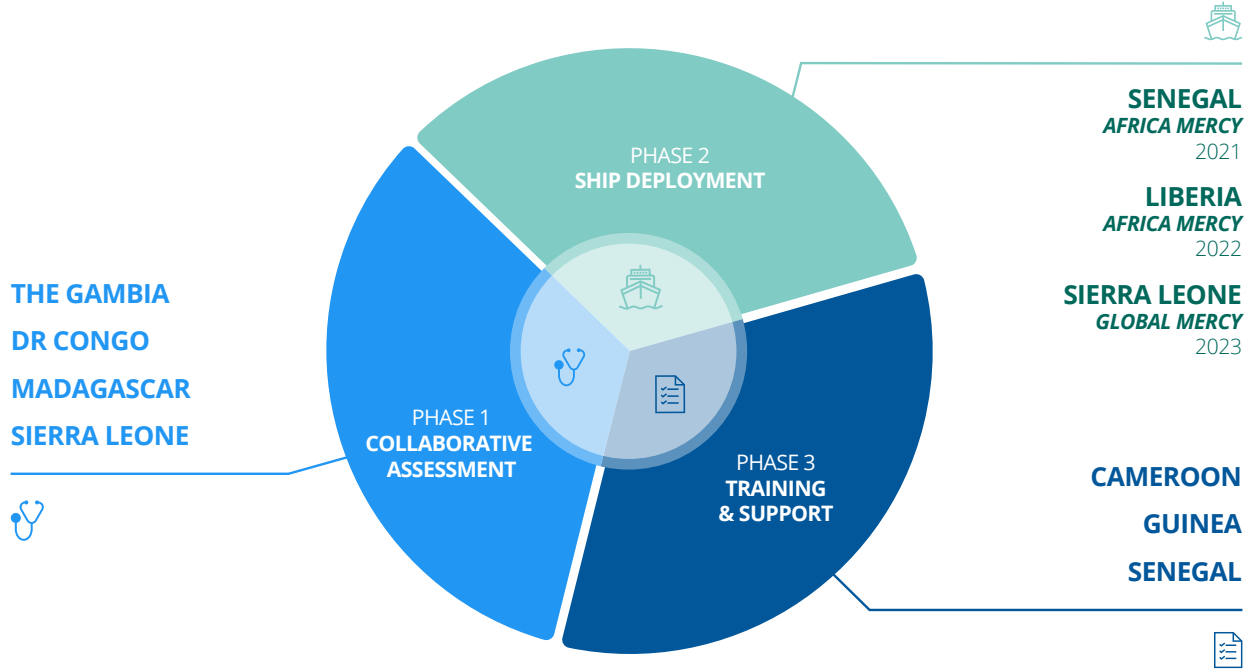
of this mission. On behalf of the *Africa Mercy* crew, I want to express our enormous gratitude for their collaboration.

Although the ship's early departure due to COVID-19 meant that the field service did not end in the way we had planned, we look forward to the day when we can return to continue serving the people of Senegal through continued partnerships. It has been an honor to serve in this beautiful nation.

You have our sincere thanks,

Mrs. Warrie Blackburn
Africa Mercy Managing Director

Effecting Change | A 3-Phase Partnership



PHASE 1. COLLABORATIVE ASSESSMENT

Mercy Ships listens, builds relationships, and collaborates with the Presidential Office, Ministry of Health, other departments of the government, and NGOs. A collaborative effort has an increased impact. A protocol of commitment is signed, taking into account World Health Organization targets.

An analysis of capacity needs within the local healthcare system is undertaken, establishing where assistance will be most effective. The Assessment Team will examine surgical and ancillary service capacity, the port, security, and build rapport with key stakeholders. An Advance Team will enhance the effectiveness of the ship deployment by preparing for the ship's arrival.

PHASE 2. SHIP DEPLOYMENT

For 10 months, a Mercy Ship is docked in the host nation's port, providing free surgical and dental care for thousands of people, training and mentoring for local healthcare workers, renovations for local facilities, and more.

PHASE 3. TRAINING & SUPPORT

Project implementers return to understand any challenges faced by local healthcare professionals in implementing learned materials and skills, provide further instruction, as well as offer encouragement and additional input.

On subsequent visits, teams ascertain how the work of Mercy Ships changed the lives of patients and trained healthcare professionals and evaluate the sustained hospital and clinic improvement. Lessons learned are used to inform future field services.

Message from Senegal Country Director

At Mercy Ships, we talk a lot about “leaving a lasting impact” because we care passionately about what we do and our desire to make a difference, to encourage and empower the passionate and skilled people we get to meet in the countries we serve. We are thrilled to be a part of transforming individual lives so that they can enjoy the fullness of life.

What a privilege, therefore, to be Country Director in Senegal where the local *Teranga* (hospitality), the dedication to excellence, and the desire for partnership found in the people of Senegal has quite literally had a lasting impact on me.

I am so grateful for the invitation from H.E. Macky Sall, President, for his invitation to serve in his country. I honor the commitment of the Ministry of Health and Social Action, the dedication and sacrifice made by the Port of Dakar who gave up one of their prime locations in order for us to enjoy a wonderful berth space, and the trust and confidence people placed in us as they came for surgery and took part in our training programs.

Amongst many others, my heart was broken when the news of COVID-19 came and the inevitable decision was made to put our services on hold. Our desire is always to

protect, empower, bring life; and as such, we knew that we had to stop flying in volunteers from all around the world and reduce the risk that we could pose to the population of Senegal. We celebrate the many people who had surgery and all those who were able to partner with us and take part in our Medical Capacity Building programs. We think of those who missed out on these opportunities and remain committed to delivering our promises. We have grown to love Senegal and cannot wait to return to this beautiful nation.

One of the privileges of being Country Director means that I was not only there before the ship arrived, but will continue working long after the ship has departed. We trust that the relationships built will continue to flourish, and that, together, we will experience the true meaning of a lasting impact – be it physically, professionally, personally or spiritually.

On est ensemble, and I believe the best is yet to come!

Kirstie Randall
Country Director, Senegal



COVID-19 Relief



In solidarity with African partners, the Mercy Ships Africa Bureau continues to dialogue with 11 partner nations regarding their COVID-19 pandemic national response.

Before the *Africa Mercy* sailed from Senegal late March, a gift of US **\$151,200** was donated to support Senegal's COVID-19 fight. As of June 30, 2020, more than **80,000 items of Personal Protective Equipment** (valued at more than US **\$125,000**), including surgical caps, protective eyewear, face masks, gloves, and infrared thermometers, were delivered to **Benin, Liberia, Sierra Leone, Madagascar, Togo, Republic of Congo, and Ghana.**

A second round of shipments is planned for the first recipient countries and to **Cameroon, the Democratic Republic of Congo, Guinea, and Senegal.** Mercy Ships is grateful for MSC's participation with shipping for the second round.

Remote seminars for mental health workers and other caregivers were delivered to participants from seven African nations.

We at Mercy Ships are so very thankful for the support we see every day from those who have become vital to our mission. We are thankful. Every volunteer crew member. Every volunteer surgeon. Every child and adult whose lives have been transformed because of your support.

As we face these challenging events, we ask that you join us in prayer for the world and for the thousands of people who have been affected by COVID-19. We pray for calm minds for the leaders of the world, so that they have the confidence and ability to deal with the situation as it continues to evolve.



Hospital

Surgical Medical Services

Gnilane, maxillofacial patient, before surgery.



Saliou | 2 years old | cleft lip

Maxillofacial, Head and Neck Surgical Project

Maxillofacial, head and neck surgeries took place almost every week over the 7 months in Senegal. Volunteer surgeons performed a total of **353 maxillofacial surgeries** for **285 patients** (165 adults and 120 children; 159 male and 126 female). Included in these figures were **80 surgeries** for children suffering from cleft lips and palates. Many infants, underweight and malnourished due to their condition, participated in our infant feeding program before their surgery. Nine highly specialized craniofacial surgeries were performed over two weeks in January 2020.

Saliou was too young to realize that he was different. Saliou's grandmother, Ndiane, refused to let his condition hinder her love. This devoted grandmother traveled 12 hours to bring Saliou to the Africa Mercy for a surgery that would change his life forever. "I'm giving thanks to God and the people at Mercy Ships," Ndiane said. "I didn't have anywhere to get surgery for Saliou, and they did that for me."



Aliou | 5 years old | burn contracture release

Reconstructive Plastic Surgical Project

Burns can leave scarring and immobilized joints. Mercy Ships volunteers provided **158 specialized reconstructive plastic surgeries** for **118 patients** (50 adults and 68 children; 65 male and 53 female). Bent limbs became straight as soft tissue tumors were removed, congenital abnormalities were corrected, and scarred tissue was released. The onboard dressings team was crucial to the success of this reconstructive plastic surgery project. Physical, occupational, and hand therapy helped patients regain function.

When Aliou returned home after receiving surgical care on the Africa Mercy, his whole family was excited. He can now ride bikes, play with his friends, and attend school with his twin sister for the first time. His grandmother, Bintou, said she never expected that her grandson could be healed for free and with such quality service.



Zackaria | 7 years old | cataracts

Ophthalmic Surgical Project

There were **543 eye surgeries** (primarily cataracts) performed for **535 blind patients** (504 adults and 31 children; 300 male and 235 female) in the operating room on the *Africa Mercy*. Surgeries for pediatric patients were done under general anesthesia; they stayed with their caregivers in the hospital wards for an average of three days before discharge. Surgeries for adult patients were day surgery and did not require any overnight stay.

Zackaria tried his best to be as independent as possible, even attempting to play ball like other kids. However, after his free cataract surgery on the Africa Mercy, he hasn't had any trouble getting around on his own!



Babacar | 5 years old | growth removal

General Surgical Project

Hernia repairs for adults and children, thyroidectomies (toxic goiters), and soft tissue mass/tumor removal made up the majority of these surgeries. The ship hospital teams provided **237 general surgeries** for **233 patients** (137 adults and 96 children; 171 male and 62 female).

Six weeks were set aside for specialized pediatric surgeries, though due to early departure, only two weeks took place in October 2019 for 38 children.

Babacar, was born with a mass of tissue connected to his sternum and dangling from his chest. It was a condition that would require a complicated surgery — one that was not available where they lived. Although Babacar's stay on the Africa Mercy was a short one, it was nothing short of impactful.



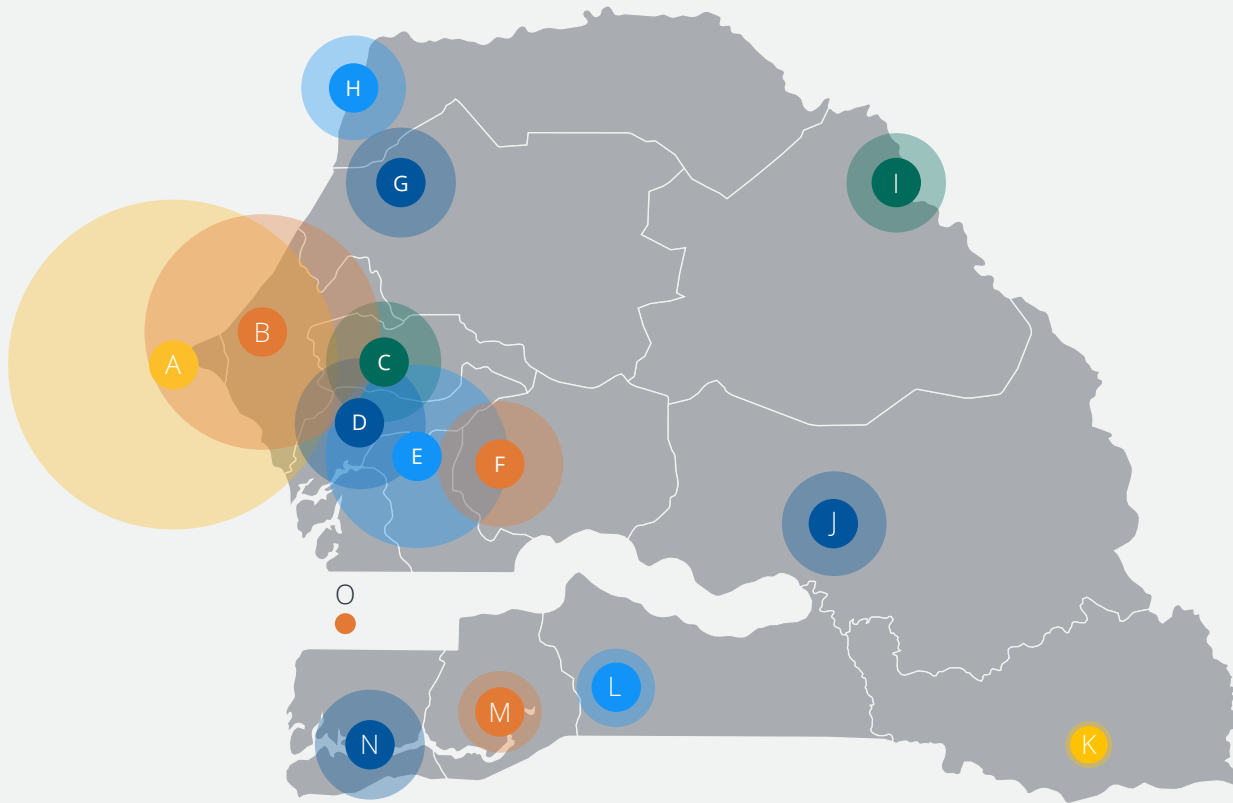
Marie Madeleine | 13 years old | quad contracture

Orthopedic Surgical Project

Many children suffer from conditions such as windswept deformities, “knocked-knees,” and bowed legs. Volunteer medical staff provided **116 life-changing surgeries** to **114 pediatric patients** (all but two patients were less than 18 years old; 59 male and 55 female). All patients received appropriate physical therapy from our Rehabilitation Team.

Despite suffering from a severe muscle contracture, Marie Madeline has always emitted an admirable confidence. She attends school and has many friends, but was unable to participate in physical activities like sports. Before surgery, she talked about her new life where she would be able to walk and run faster, and even play football! Now, after surgery, she wears a big smile on her face, stands tall, and walks with confidence.

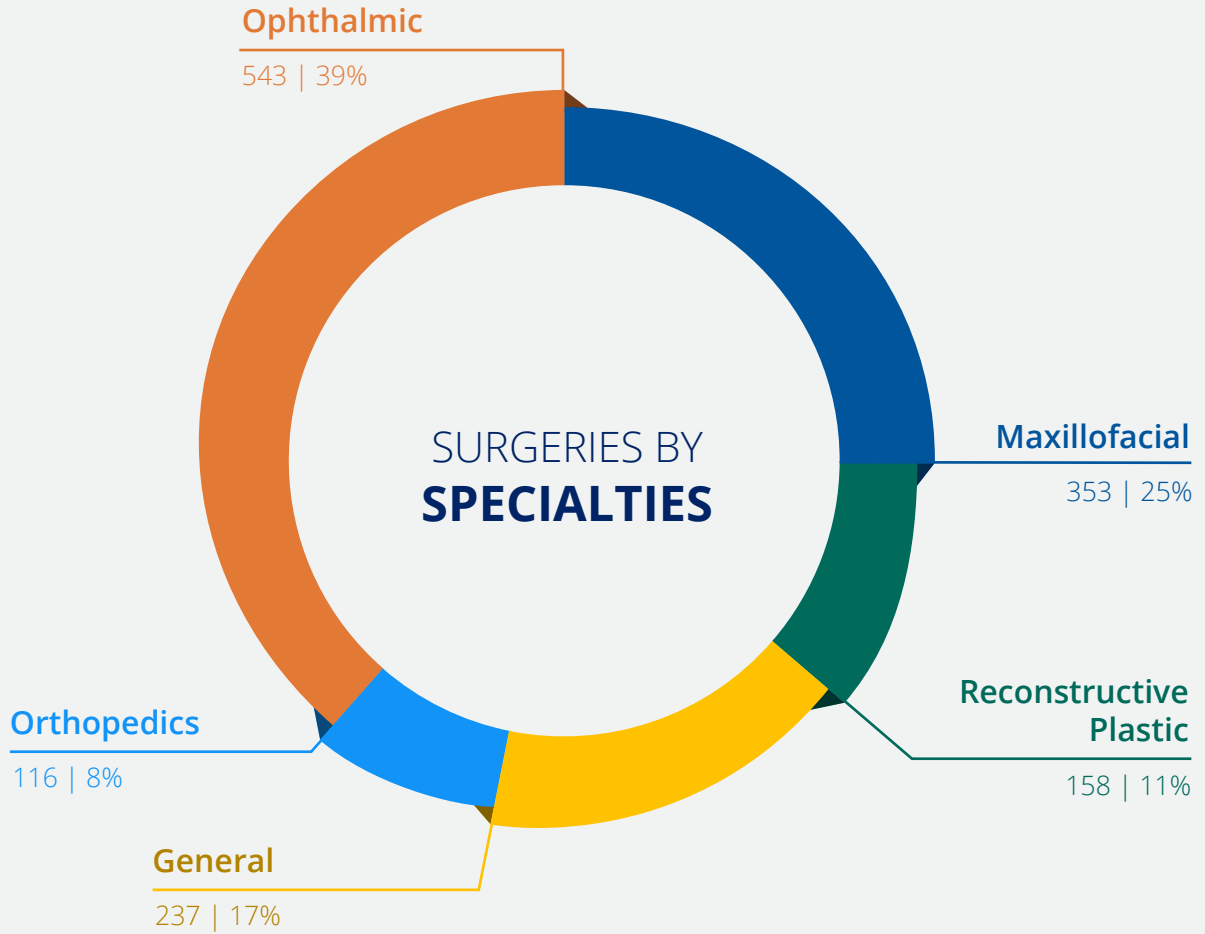
1,285 UNIQUE SURGICAL PATIENTS



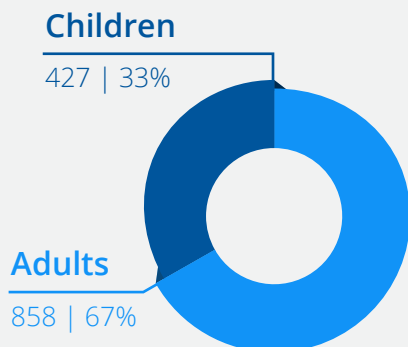
SURGICAL PATIENTS BY REGION

| | | | | |
|----|------------------------|-----|--|-----|
| A. | Dakar | 445 | | 35% |
| B. | Thiès | 224 | | 17% |
| C. | Diourbel | 58 | | 5% |
| D. | Fatick | 69 | | 5% |
| E. | Kaolack | 133 | | 10% |
| F. | Kaffrine | 65 | | 5% |
| G. | Louga | 51 | | 4% |
| H. | Saint-Louis | 45 | | 4% |
| I. | Matam | 40 | | 3% |
| J. | Tambacounda | 44 | | 3% |
| K. | Kédougou | 9 | | 1% |
| L. | Kolda | 25 | | 2% |
| M. | Sédhiou | 27 | | 2% |
| N. | Ziguinchor | 48 | | 4% |
| O. | Outside Senegal | 2 | | 0% |

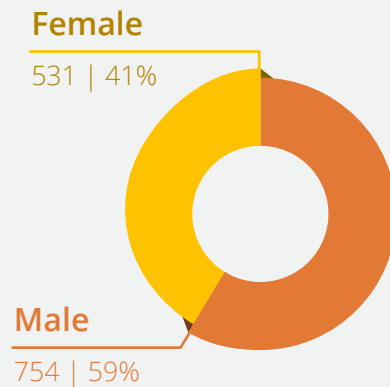
1,407 TOTAL SURGERIES



SURGICAL PATIENTS ADULT VS CHILDREN



SURGICAL PATIENTS GENDER





Hospital | Non-Surgical Medical Services

Dentist Janina Sander (DEU) and Dental Assistant Abbi Vandenberg (CAN) provide dental care for a patient.

Dental Project

As the Ministry of Health and Social Action requested we base our dental clinic outside the Dakar city area, an unused case foyer facility in Sangalkam was approved for our use, and renovations and improvements were made to the buildings. The selection of potential dental patients (adults and children) were conducted outside the compound twice a week. The team provided dental care for **5,591 patients** (4,171 adults and 1,420 children / 2,273 male and 3,318 female) by performing over **12,945 dental procedures** — 90% non-surgical extractions. In addition, 818 patients received clinical dental hygiene services. While waiting for dental services, over **7,000 patients and caregivers** received basic oral health instruction by trained day crew.

Palliative Care

The Mercy Ships Palliative Care project worked to meet patients and their families' needs for end-of-life care, employing a holistic approach to the physical, psychological, spiritual, and social needs of each person. The Palliative Care Team in Senegal conducted **75 home visits** for a total of **10 patients** (eight adults and two children). Two patients died during the ship's visit, one patient returned home and the other patients were transitioned to a local palliative care team. An association for Christian healthcare workers invited the team for a sensitization session during their annual conference, where 25 people attended. The same team facilitated two training courses in Dakar, see the details in the courses section.



Mercy Ministries Coordinator Lere Olupayimo (NGA) leads a group in a song.

Hospital Chaplaincy

The Hospital Chaplaincy Team provided prayer, counsel, and comfort to hundreds of patients and caregivers in the ship's wards and at the HOPE Center through group activities and one-on-one chaplaincy (**640 sessions**) over seven months. Eleven Hospital Chaplaincy Day Crew received instruction in counseling and sharing oral Bible stories before the ship's arrival, and continued with weekly instruction for the duration of the field service.

The Hospital Chaplains assisted with downloading the audio files of the Bible in local languages, scriptures, praise and worships songs, Christian teachings, and Jesus-centered films, and provided these via more than **300 micro SD cards** to local residents.

Mercy Ministries

Through partnership with five local ministry centers, hundreds of crewmembers were able to participate in **78 site visits**. Mercy Ships crew often pursued additional ministry opportunities during their off-duty hours. Crewmembers routinely visited: La Pouponnière Babies Home, My Father's House Children's Home, Mission Chrétienne IRIS Dakar Village Children's Outreach, Jeunesse en Mission (YWAM) Community Children Center (Teen-Bi) and the Mercy Ships HOPE Center for pre- and post-operative surgical patients. The Mercy Ministries team most often used oral Bible storytelling techniques, music, crafts, and games in their work. All activities were done in partnership with local organizations in the greater Dakar area.



Patients participate in a music therapy class while recovering from surgery at the HOPE Center.

HOPE Center

During our assessment period, an unused facility owned by the SIL Senegal was selected and agreements made to lease and renovate the location for use as our HOPE (Hospital OutPatient Extension) Center.

Once selected, many patients from outside the Dakar area elected to stay at the HOPE Center, where they could gain strength and confidence for their surgery, enjoy a safe, clean, local housing option, and socialize with one another. After discharge from

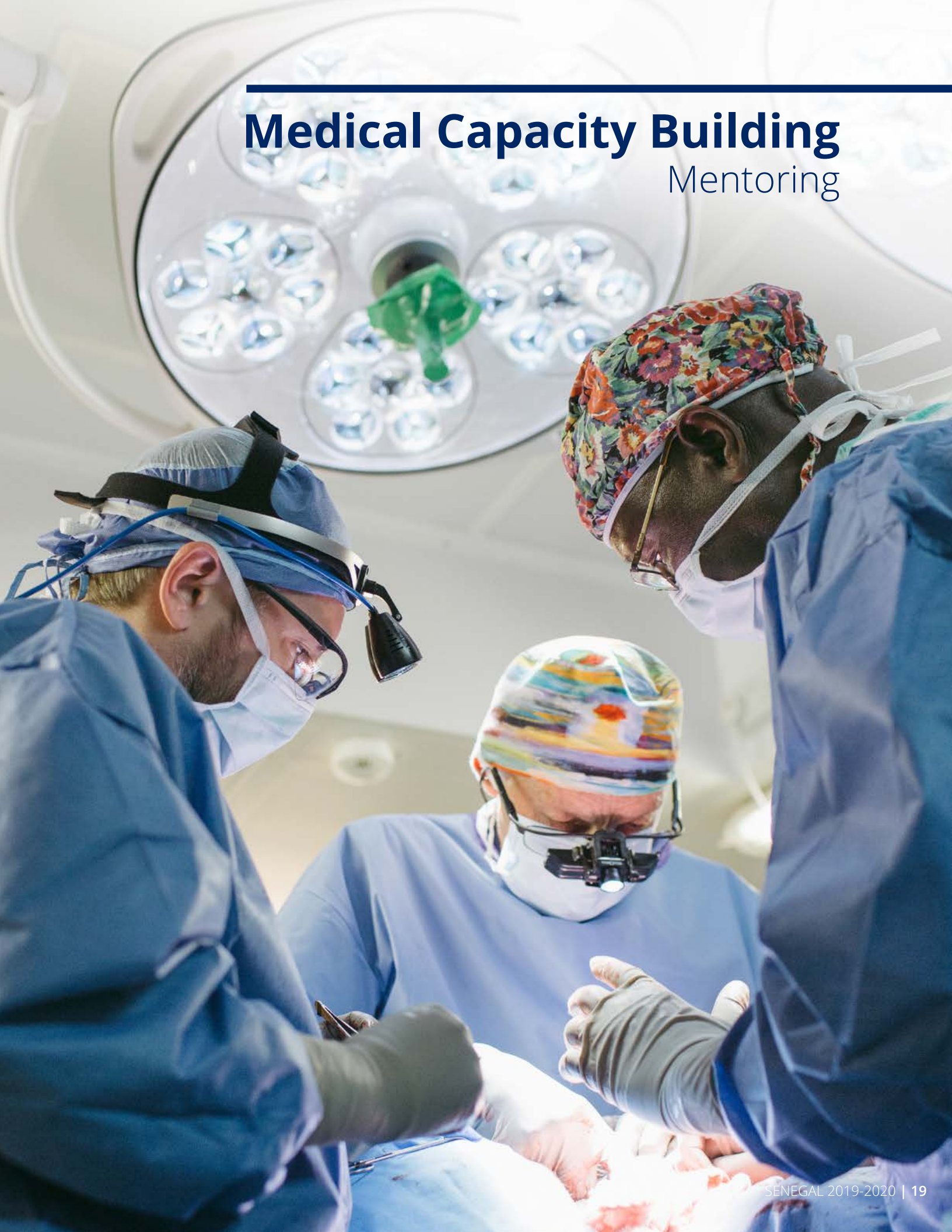
inpatient care onboard the *Africa Mercy*, many patients who required follow up care or therapy returned to the HOPE Center. The HOPE Center offered **15,097 patient nights + 10,366 caregiver/sibling nights**.

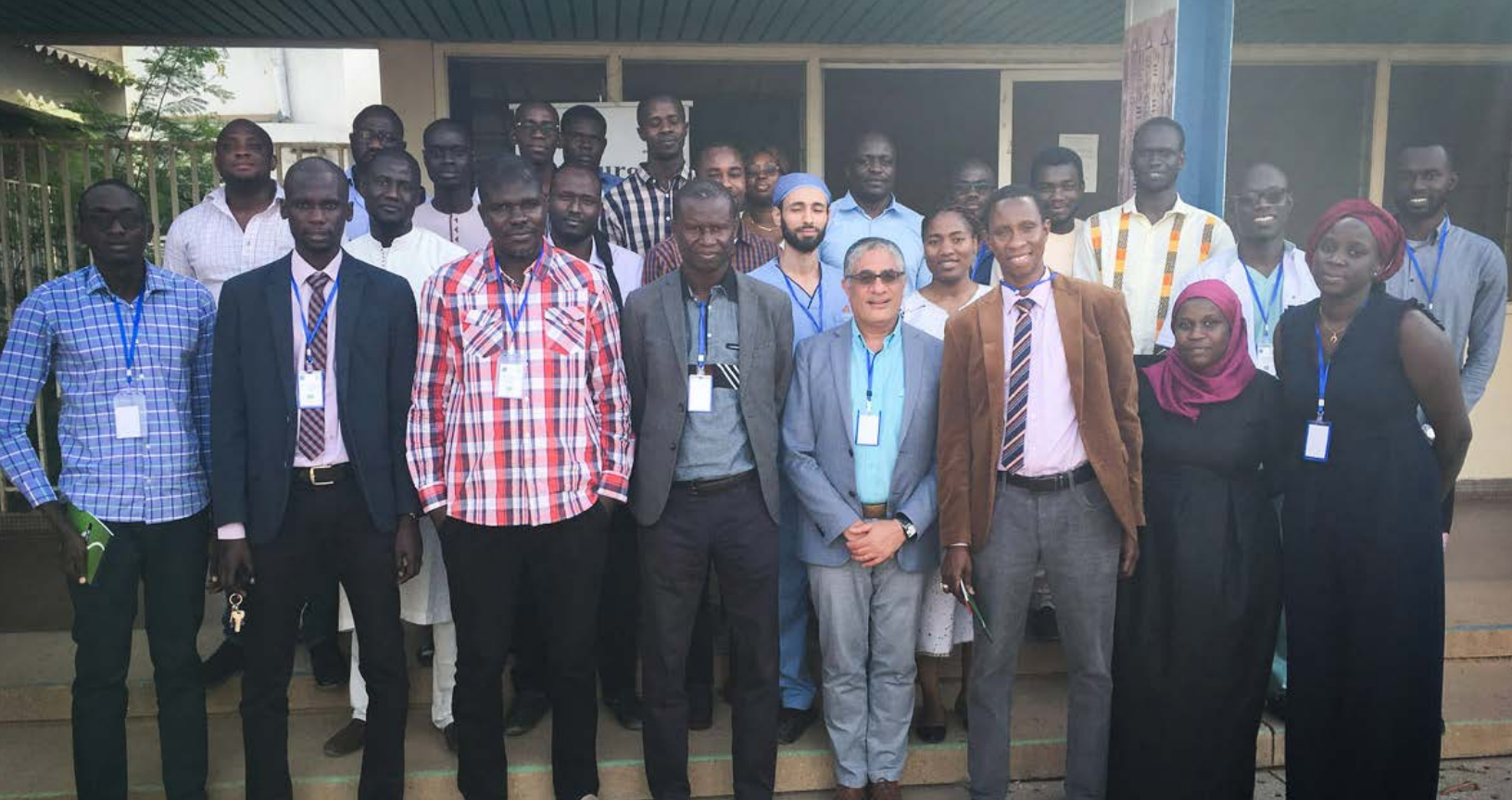
The Clubfoot Clinic was based on the same compound.

Right: Dr. Ryan Brown, Otolaryngology Surgeon, performs surgery alongside Dr. Neil Thomson and an MCB participant surgeon.

Medical Capacity Building

Mentoring





International facilitator and participants at host hospital.

Pediatric General Partner Unit Mentoring Program (PUMP)

The first-time-offered Pediatric General Partner Unit Mentoring Program (PUMP) was based in Dakar at CNHU Aristide le Dantec hospital. A total of **6 healthcare providers** (3 male and 3 female) were mentored including:

- 1 pediatric surgeon – mentored in operating rooms onboard the *Africa Mercy* during one week and also participated in the Clubfoot project
- 1 anesthesia technician – one week
- 4 ward and operating room nurses

Additional lectures/courses were held at the host hospital and **60 healthcare professionals** attended over the **4 days / 20-course hours**. Some of these participants also attended the various Medical Capacity Building courses offered in Dakar.

“The entire team at the clubfoot clinic and the entire staff of the pediatric surgery department have learned a lot from this partnership. Our sincerest thanks to all members of the ship.”

— *Local Surgeon*



Mercy Ships nurse Bethany Wall (CAN) mentors Dieynaba Balde (SNG) and Fatou Yama Diane (SNG) on the *Africa Mercy*.

Burns PUMP

The Burns Partner Unit Mentoring Program (PUMP) was based at CNHU Aristide le Dantec hospital in Dakar with their Burns unit. A total of **17 healthcare providers** (6 male and 11 female) were mentored including:

- 3 plastic surgeons – mentored in operating rooms onboard the *Africa Mercy*, between 1 – 2 weeks
- 2 anesthesia providers – over 2 weeks each
- 8 ward and operating room nurses – ranging from 3 to 68 hours per participant
- 4 physical therapists

Some of these participants also attended the various Medical Capacity Building courses offered in Dakar.

Maxillofacial PUMP

The Maxillofacial Partner Unit Mentoring Program (PUMP) was based at CNHU Aristide le Dantec in Dakar, mentoring their small maxillofacial team. A total of **8 healthcare professionals** (5 male and 3 female) were mentored including:

- 1 maxillofacial surgeon – briefly
- 2 anesthesia providers – averaging over 75 hours
- 5 nurses – ranging from 10 to over 90 hours

Some of these participants also attended the various Medical Capacity Building courses offered in Dakar.



Dr. AJ Collins (AUS) and Dr. James Smellie (GBR) mentor Dr. Abdoulaye Dieye (SNG) on the *Africa Mercy*.

Surgeon Mentoring

Surgical mentoring was provided for **12 Senegalese surgeons** (10 male and 2 female). Mentoring took place in the operating rooms on the *Africa Mercy* or at the surgeons' hospitals. These included:

- 2 general surgeons
- 2 neurosurgeons
- 2 orthopedic surgeons
- 3 maxillofacial (ENT) surgeons
- 3 ophthalmic surgeons from 3 regions

Their **mentoring hours ranged from 11.5 to 69.75 hours** per participant, normally over two weeks. They represented seven hospitals from four regions of Senegal. One additional orthopedic surgeon received mentoring, including with the Clubfoot Project. Originally from Brazil, he has worked in Senegal for more than ten years.

"I really like the teamwork and the respect between the staff, especially their sympathy towards patients and people from all over."

— *Neurosurgeon Participant*



Ndoumbe Mbodji (SNB) changes a dressing under the mentorship of Sarah Johnson (USA).

Anesthesia Provider Mentoring

Anesthesia provider mentoring was provided for **2 female physician anesthetists** onboard the *Africa Mercy*. Anesthesia providers were not only taught theoretical principles to improve their knowledge and skills, but also trained to teach others. The physician anesthetists were both from the Centre Hospitalier National Universitaire de Fann in Dakar and their mentoring hours averaged at **63 hours** over two weeks each. One participant also attended the SAFE Pediatric Anesthesia Course and the team selected her for the training-of-trainers course. The Medical Capacity Building team then invited her to join the team for the course in January 2020 where she applied and shared her knowledge learned.

Surgical Nurse Mentoring

Surgical nurse mentoring was provided for **37 participants** (13 male and 24 female), including ward, intensive care, and operating room nurses. They participated onboard the *Africa Mercy* and/or at three participating hospitals. Their **mentoring hours ranged from 1 to 82.5 hours** per participant.

"I have seen that the patients are well treated in Mercy Ships, they dance with the patients, in short, they have a good behavior towards them. I'd like to put that into practice where I work."

— Nurse Participant



Above: Clubfoot Program Manager Nick Veltjens (AUS) checks cast angle post surgery.
Right: Dr. Khady Fall teaches at the Primary Trauma Care Course.

Clubfoot Project

This project was unique in that it included direct medical services and medical capacity building, using both courses and mentoring.

Most of the project took place at the Clubfoot Clinic at the SIL Center on the same compound as our HOPE Center in Dakar.

The Ponseti Method was used to treat **19 unique patients** with **29 individual clubfeet** needing repair. Mentoring was focused on pediatric and ortho-trauma surgeons.

One Clubfoot course was offered in September 2019, with a total of **11 participants**. All participants were from Senegal except one surgeon from Brazil

who works in Senegal. Some of these same participants attended two other courses related to percutaneous Achilles tenotomy and HOKE Achilles tendon lengthening procedures for children with clubfoot.

Upon our early departure, 18 patients were transitioned to Albert Royer Children's Hospital in Dakar. One patient was transferred to a training participant's clinic - Centre Medico-Social Fabrique d'Espoir.

Donations of clubfoot teaching supplies, tools, equipment, medical supplies, office supplies, and furniture valued at US **\$6,407** were made to the Centre Hospitalier National d'Efants Albert Royer – pediatric surgery group.

Medical Capacity Building

Courses





Dr. Joleen Moore (GBR) demonstrating resuscitation on an adult manikin.

'SAFE' Obstetric Anesthesia Courses

The SAFE (Safer Anesthesia from Education) Obstetrics Anesthesia course was offered once in Dakar and in two of the more remote regions, Tambacounda and Ziguinchor. The course schedule was over **three days** with an average of 21-course hours in both practical and theory. A total of **60 anesthesia providers, obstetricians, physicians, medical students, and midwives** participated (27 male and 33 female).

One training-of-trainers course also took place in September 2019 with four participants from four different medical facilities.

'SAFE' Pediatric Anesthesia Courses

Mercy Ships crew presented **two, three-day** courses on SAFE (Safer Anesthesia from Education) Pediatric Anesthesia with a total of **40 anesthesia providers and residents** participating (23 male and 17 female). The courses were held in Dakar in October 2019 and January 2020. During the same weeks, our international facilitators selected **14 participants** (7 male and 7 female) who completed the one-day training-of-trainers course so they are empowered to train others.

Due to the early departure, Mercy Ships canceled one three-day course and one training-of-trainers course planned for April 2020 in Dakar.



Colm Lanigan (IRL), MCB Program Partner, training during the Primary Trauma Care Course.

Primary Trauma Care Courses

Primary Trauma Care (PTC) approved facilitators conducted **six, two-day courses** in Dakar, Tambacounda, and Ziguinichor for **107 participants** (57 male and 50 female).

Four of the facilitators were participants during past field services in Africa and were trained to be trainers. Mercy Ships brought them to Senegal to continue their training by helping to facilitate the course.

Of the participants, **19 participants** were selected and completed the one-day training-of-trainers and helped to facilitate the course for others. Participants ranged from **physicians, anesthesia providers, and nurses** who are involved with trauma care.

Essential Pain Management Courses

Four facilitators from the United Kingdom, Benin and Guinea came to Senegal to offer **six, one-day courses** in post-surgical related pain management. Representing nine regions of Senegal, **92 healthcare professionals** (45 male and 47 female) participated in the seven hours of training. Of those, **17 participants** were selected to receive a day of instruction to become a trainer of this course. Most helped with the instruction of the other courses later in the week.



Dr. Alan Abel (USA) reviews the suturing practice of two participants.

Essential Surgical Skills Courses

Mercy Ships provided **four** Essential Surgical Skill Courses to **39 healthcare professionals** (28 male and 11 female). The goal of the course was to impart knowledge and skills to surgeons in the principles of safety, open surgery, trauma, and orthopedics, while helping them build upon the skills they already possessed. These courses were in partnership with the Association of Surgeons of Great Britain and Ireland.

After two courses, our international facilitators selected **14 participants** for additional instruction on how to train others in this course material. All of those trained to be trainers assisted with the following courses under the supervision of our international facilitators as part of their training.

Safe Surgery Courses

Safe Surgery Training impacted the entire nation of Senegal — 17 hospitals. A total of **455 healthcare professionals** (318 male and 137 female) from local hospitals participated in the **three to four-day** training covering various topics related to providing safe surgery. Mercy Ships was able to distribute **13 Lifebox pulse oximeters** — valued over **\$3,500**, to nine hospitals.

Due to early departure, follow-up visits were conducted at 3 of the 17 participating hospitals, where additional training took place.



A participant answers a question during the lecture portion of a palliative care course.

Palliative Care Courses

Two Palliative Care courses took place for healthcare professionals, ranging from nurses, pharmacists, midwives to doctors, organized in cooperation with Hospice Africa Uganda. One week course held in December 2019 with **37 participants** (10 male and 27 female) for 36.5-course hours. From this course, ten participants were chosen and trained over four days (25-course hours) in the training-of-trainers. The second course took place in March 2020 for **33 participants** (11 male and 22 female) for 29 course-hours, taught together with the participants of the training-of-trainers week.

Regional Anesthesia Course

A **one-day training course** (six hours) took place with **9 doctors** (7 male and 2 female) from four hospitals located in Dakar.

Following the course, individual observations were done in small groups of two over four days. In addition, Mercy Ships crew conducted individualized mentoring in small groups in the participant's local hospitals over four days. Mercy Ships donated **four portable ultrasound machines** to the hospitals that were represented during the course.



Lead facilitator Dr. Andre Mermoud (CHE) observes one of the mentoring participants while doing Glaucoma surgery.

Ophthalmic Courses

The first course in basic eye care included ophthalmic providers and others took place in Thies with our host partner, Hôpital Barthimee. The training took place in September 2019 over three days for 18-course hours. A total of **29 participants** (16 male and 13 female) represented eight regions of Senegal.

A second Ophthalmic Course, in partnership with the Swiss Vision for All Foundation, was conducted in February 2020 with a focus on glaucoma, strabismus, and retina care for **31 ophthalmic healthcare professionals** (17 male and 14 female) from six regions of Senegal.

A brief opportunity to share about the ophthalmic surgical project and the patient selection took place in 2019 at a conference for Christian Mission Health Workers of Senegal with 83 participants.

"I want to raise awareness among the population of the seriousness of these diseases, how important it is to detect and screen these diseases early, and to have adequate care."

- Course Participant



Participants learning how to use Biomedical Test Equipment (Electrical Safety Tester) on medical equipment.

Biomedical Technician Training Courses

In partnership with Optimum Biomedical Limited of the United Kingdom, a biomedical technician accredited training course was conducted. The nine-week course had **18 participants** (15 male and 3 female), representing eleven of the fourteen regions of Senegal. Following the graduation in late January 2020, Mercy Ships' Biomedical Project Manager completed 4 of 18 hospital visits before early departure.

In cooperation with the Ministry of Health and Social Action, Mercy Ships will deliver biomedical test equipment to hospitals. The Head of Biomedical Engineering of Senegal will facilitate the allocation of other critical test equipment, including various analyzers and meters, based on the needs in the country.

Sterile Processing Courses

In this project, SPECT, a Canadian partner, and Mercy Ships sought to improve the sterile processing practices used by technicians in Senegal's hospitals. A total of **46 participants** (30 male and 16 female) attended one of **two, four-day Sterile Processing Courses** in Dakar averaging 24 course-hours. For the first course, all participants were from the Dakar region; during the second-course others joined representing eight of the interior regions of Senegal. Following the first course, **11 participants** were selected for additional training-of-trainers over three days (21 course-hours) to be better equipped to train others. Four of those who completed the training-of-trainers from four hospitals taught the second course under the supervision of our international facilitator.



Seedlings in a greenhouse at the Beer-Sheba training site in Sandiara.

Nutritional Agriculture Course

A total of **33 participants** (24 male and 9 female) from 6 non-governmental organizations and the municipality of Sandiara completed **20 weeks of training**. Our host partner, The Beer-Sheba Project, other partners, and the mayor of Sandiara, Dr. Serigne Gueye Diop, provided great support. Two other participants started but left before the training finished for new jobs. The participants represented 10 of the 14 regions of the nation of Senegal. They received instruction in nutritionally based, biologically, and ecologically sustainable agriculture. The course included both classroom and hands-on instruction.

This project also included training in food transformation and effective response measures to climate change impact on agricultural practice and output.

After the 20 weeks of training, the new participants returned home to set up their agriculture training project. The Mercy Ships Agriculture Program Manager will return in 2021/2022 to conduct follow-up visits and see the progress made by participants.



Infrastructure Projects

Volunteer dental crew work in the renovated dental clinic in Sangalkam.

HOPE Center

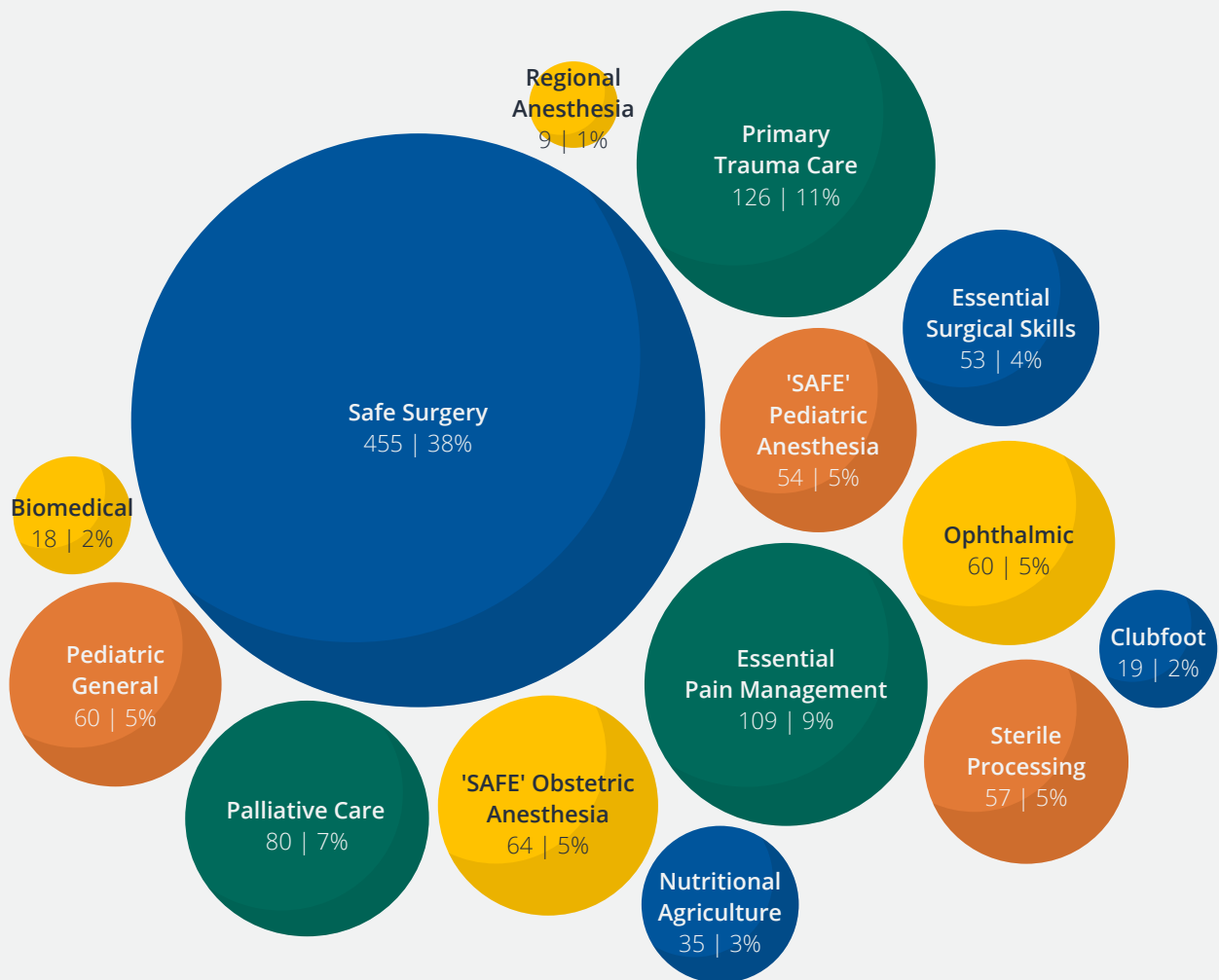
In line with our infrastructure requirements, the building for our Hospital OutPatient Extension (HOPE) Center was renovated to meet our operational requirements. Through our partnership with Engineering Ministries International (EMI), for project planning and construction management, and our contractor Ousmane Diouf-Mbirdiam (O.D.M.), the work commenced in late June 2019 and was completed by early September. The containerized ablution units were installed in early November 2019 after some initial delays.

Dental Clinic

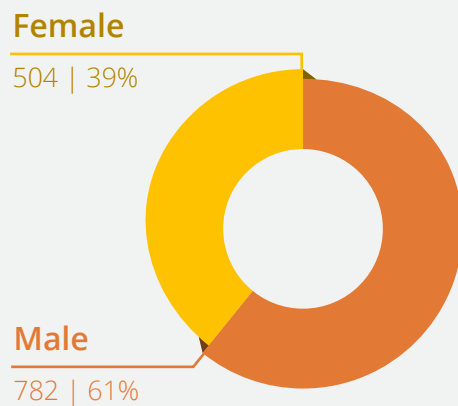
With the need to base our Dental Team activities outside Dakar city, an empty facility in Sangalkam was identified and arrangements made with the Ministry of Health and Social Action and the local mayor for our use, and renovations of the facility.

Through our partnership with Engineering Ministries International (EMI) for project planning and construction management and our contractor Gueye Prestations de Services et BTP, the work commenced in late June 2019 and was completed by early September. At our departure in March 2020, the facility was returned to the community of Sangalkam.

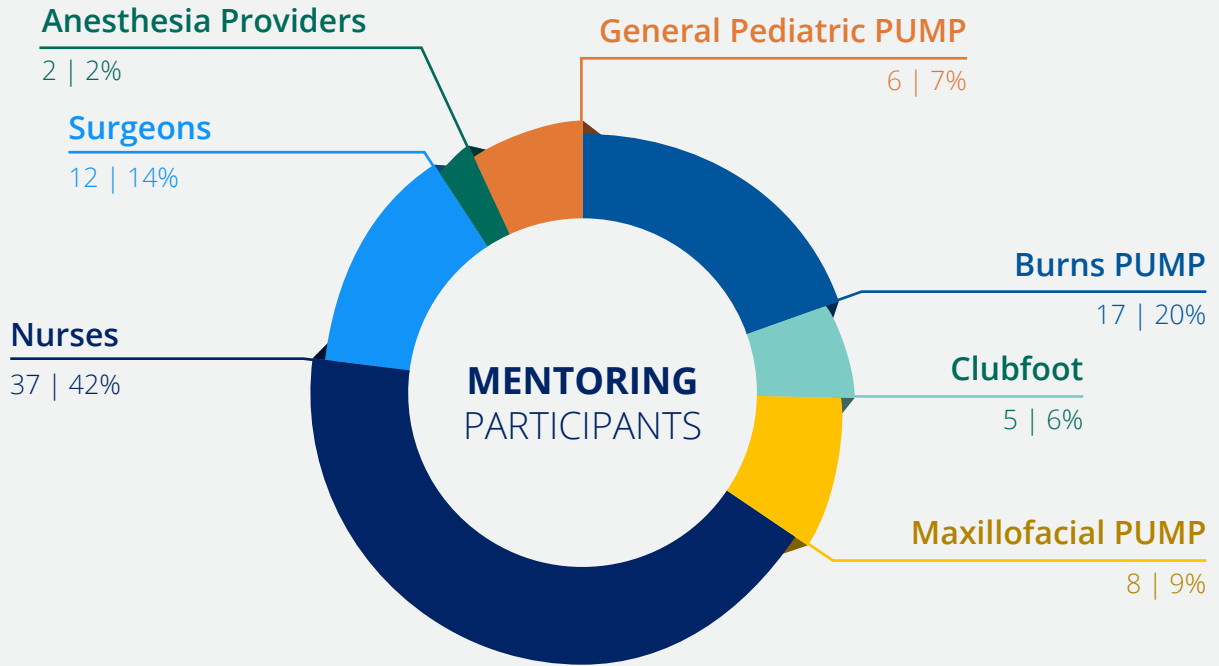
1,199 TOTAL COURSE PARTICIPANTS



ALL PARTICIPANTS GENDER

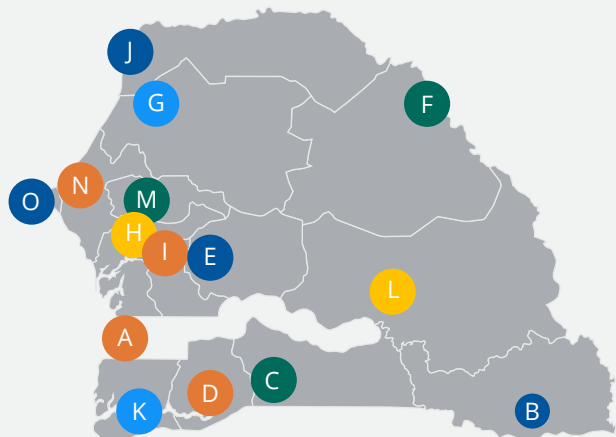


87 TOTAL MENTORING PARTICIPANTS



ALL PARTICIPANTS BY REGION

| | | |
|----|-----------------|-----------|
| A. | Outside Senegal | 8 1% |
| B. | Kédougou | 11 1% |
| C. | Kolda | 18 1% |
| D. | Sédhiou | 27 2% |
| E. | Kaffrine | 30 2% |
| F. | Matam | 38 3% |
| G. | Louga | 41 3% |
| H. | Fatick | 45 3% |
| I. | Kaolack | 49 4% |
| J. | Saint-Louis | 50 4% |
| K. | Ziguinchor | 56 4% |
| L. | Tambacounda | 78 6% |
| M. | Diourbel | 106 8% |
| N. | Thiès | 107 8% |
| O. | Dakar | 622 48% |





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