



Surgical Training Programme

May 2020

Annual Report 2019



Ministry of Health and Sanitation



Summary

2019 has been our most difficult year since CapaCare was established. The outbreak of Lassa fever within Masanga Hospital in November with the loss of two patients and our Programme Coordinator, Dr Wouter Nolet is a tragedy beyond words. Wouter was an exceptional leader, a knowledgeable medical doctor, and a person that touched his surroundings.

Sierra Leone can be such a pleasant place to work in, and at other times equally harsh. In 2019 we have experienced both ends of the spectrum. The death of Wouter made us see how vulnerable we are as individuals and as an organisation.

All of us that work with healthcare in Sierra Leone, know that such work does not come without risks. Many of us were forced to take this risk into account during the Ebola outbreak, and we have been forced to do the same now for COVID-19. Lassa fever is a virus we know we might get exposed to, and we have on a few occasions in the past. As the Chairperson of CapaCare, I have asked myself over and over again since Wouter's passing: were we as an organisation prepared enough for Lassa fever? Are we professional enough towards the volunteers and employees we are sending to Sierra Leone? Are we able to provide a workplace that is safe enough? Do our volunteers and employees understand the risks by working in Sierra Leone? Are we offering enough training and resources to avoid such horrible outcomes?

When a good friend and esteemed colleague dies whilst working in Masanga Hospital it is hard to claim "yes we have" to any of the questions above. It is important to look back and evaluate what we could have done differently to avoid what happened with Wouter. This process started when the hospital closed after the outbreak and we will continue to reflect and be critical of our own set-up. No doubt that both CapaCare and Masanga Hospital have some limitations. High dependence on volunteering and resource constraints are two of the more prominent.

Our common vulnerability that became so apparent after Wouter's death brings the whole CapaCare family together. The support offered from all corners of the world has given comfort. Many of those involved with CapaCare have expressed an even stronger commitment to our common work of improving healthcare in Sierra Leone. This is a token of trust that we will bring with us in the challenging times ahead. We are committed to creating an organisation that is more robust, more professional and self-critical towards standards of safety for our employees, volunteers, trainees and patients.

We hope that the restructuring of CapaCare that started in 2019 will be good first steps in that direction. We welcome CapaCare Netherlands into the family and I'm sure all of our fantastic dedicated tropical doctors will be a tremendous asset to our common goals. This will also be our way to pay tribute to our lost friends from the previous year: Wouter, Sulaiman and Erdi.



Håkon A. Bolkan
CapaCare Chairperson

Trondheim, Norway – May, 2020

IN MEMORIAM

Wouter Nolet 1987–2019

Our Programme Coordinator, Wouter Willem Eric Nolet, contracted Lassa fever during an emergency surgery and passed away in Leiden on the 23rd of November. Wouter died as he tried to save the life of a pregnant woman at the Masanga hospital in Sierra Leone.

Wouter touched us all with his nice personality, ambitions and was clever and skilful medical doctor. Wouter was a good friend, colleague and natural born leader. As our leader in Sierra Leone he was highly appreciated by his team. We admired his knowledge, professionalism and passion to improve access to surgical care in the country. The way he was able to provide his patients the best possible treatment and his students thoughtful guidance never stopped to impress us.

Wouter had a real gift of interacting with people, he was so humble and friendly, and always appreciative of every small gesture. He was a really special person, bringing light and joy wherever he went. His way of bringing people together allowed him to develop a close network of friends, colleagues and partners in all corners of Sierra Leone and beyond.

The work of Wouter has been a source of encouragement to those that crossed his path and we find comfort knowing that many people benefited from his efforts. Many lives have been saved as a result of his work. It is so sad that one of our dearest colleagues has had to lay down his life far too early. May his soul rest in peace for evermore.



IN MEMORIAM

Sulaiman P Kamara 1974–2019

Our friend and colleague, surgical health officer Sulaiman P Kamara, died in Makeni on the 28th November, having been cared for in his sudden illness by former colleagues.

Sulaiman was one of the early years STPs starting his training in 2013. He was always the most diligent of students and went on to become a conscientious clinician. He found the line of work that suited him best and provided quality care to so many. He always seemed slightly surprised by his own good works.

Sulaiman was tall and imposing in stature and soft and kind in nature. He was a gentle giant of a man and a big brother to many. His nature was naturally humble and self-effacing. He was never heard to say a cross word and always saw the very best in other people. He laughed a lot and it was the infectious kind which even now will bring a smile to the faces of those who remember it. He was a loving family man who spoke with such pride of his children and those he cared for.

Sulaiman was a true gentleman. The world was a better place because he was in it. He was much loved and will be much missed. May his soul rest in peace for evermore.



IN MEMORIAM

Erdi Huizinga 1974–2020

Dr Erdi Huizinga has been a close friend of the CapaCare Programme for many years. She has taken on many different roles, both as trainer in Masanga, supervisor in various hospitals. Dr Erdi passed away on January 14th, 2020.

Erdi has been involved in our Surgical Training Programme since the start in 2011. She has served the Programme from all four of the hospitals she worked at in Sierra Leone; Magbenteh Hospital in Makeni, Masanga Hospital in Masanga, Lion Heart Medical Center in Yele and the City Garden Clinic in Makeni. Knowing the strength of a task sharing programme, as she had seen the results already with her own eyes in Malawi, she has been a great support to the work of CapaCare.

We have known Dr Erdi as an energetic and passionate Dutch tropical doctor. She was full of love for the people she served. She had a strong drive to share her knowledge with those who worked alongside her. Her seemingly endless energy and drive for quality of care was an inspiration for many. Her honesty, commitment and expertise helped colleagues and students to reach higher levels, achieving things they would not have believed were possible. Erdi would always give everything when someone came to her for (medical) help. During her career she has made a difference for countless people in need. She was a true tropical doctor in her heart, mind, spirit and in the choices she made. She will continue to be an example to us.

We will miss her dearly and carry her memory with us in our hearts. May her soul rest in peace for evermore.



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About CapaCare

Organisation

In 2019 major changes have taken place within the organisation. CapaCare International has been established, and the chapter CapaCare Nederland (Netherlands) started. The main reason for this expansion was to adjust the organisation to increasing activities and professionalise the way things are set up. This created opportunities to rethink and harmonise the statement of intent, code of ethics and conduct, bylaws and year cycle. These will be published as soon as they are adopted.

Core responsibilities and functions were set during the inaugural CapaCare International Council meeting on November 6th, 2019, with two representatives of each national chapter (Norway, Netherlands, and Sierra Leone) and the Executive Board. The various chapters have their own focus and bylaws and are bound by national regulations. CapaCare International will be formally registered in Norway in 2020.

The interim CapaCare Executive Board consists of Håkon A. Bolkan (Chair), Alex van Duinen (member), Bart Waalewijn (Secretary) and Puck Hegeman (Treasurer, HR). During the next meeting in 2020 office bearers and members will be formalised.

The secretariat is staffed by Annemarie van Duinen and Emma Margrett.

CapaCare Norway consists of Håkon A. Bolkan (Chair), Puck Hegeman (Treasurer), Alex van Duinen (member), Andreas GjØra (member), Anne Husby (member), Barbro Lindheim-Minde (member), Brynjulf Ystgaard (member), Håvard Adde (member), Kurt Krogh (member), Magnus Endal (member), and Øyvind Veel Svendsen (member).

CapaCare Netherlands consists of Josien Westendorp (Chair), Bart Waalewijn (Secretary), Daniel van Leerdam (Treasurer), Martelien Grootjans (member), Marieke Oostvogels (member), and Tom Gresnigt (member).

CapaCare Sierra Leone consists of Alex van Duinen (Chair), Abu Conteh (member), Emile Koroma (member), Kojo Carew (member), Lawrence T Kargbo (member), and Thomas Ashley (member).

The organogram of the local organisation in Sierra Leone is presented on page 8 (Figure 2). The organogram of CapaCare International is presented below (Figure 1).

The tragic loss of our Programme Coordinator Wouter Nolet created an open position. Erik Wehrens has taken over this function from 2020.



Figure 1. Various hierarchy layers with close interrelationships as defined by bylaws of CapaCare international and various chapters.

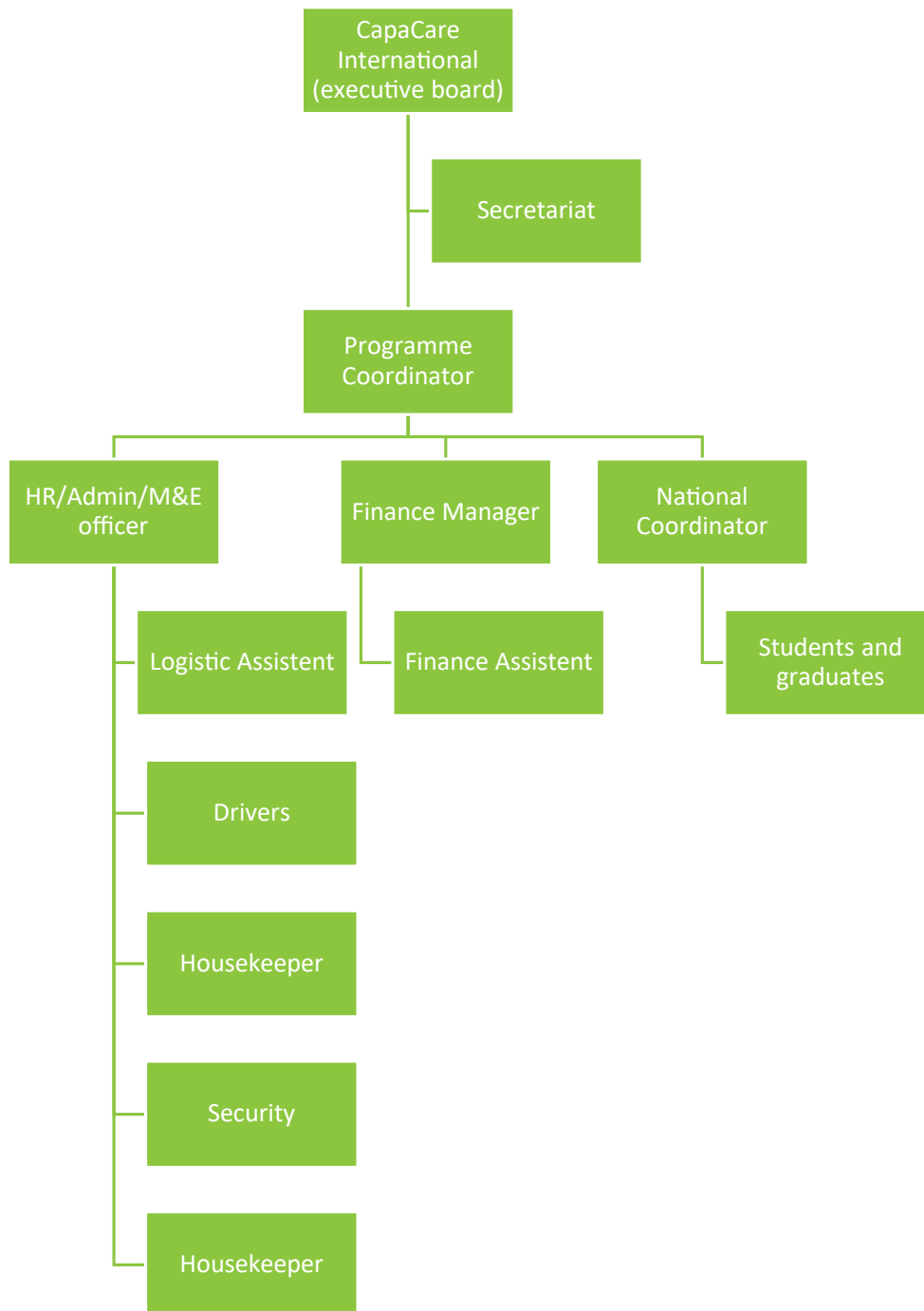


Figure 2. Organogram of local organisation in Sierra Leone.

Statement of Intent

Our vision

Quality healthcare for all.

Our mission

We contribute to sustainable healthcare systems through capacity building in underserved populations by sharing of medical knowledge and skills in close collaboration with local health authorities and partners.

Our focus

We focus on training of medical professionals in underserved and hard to reach populations because we believe that skilled health professionals are crucial for sustainable health systems.

Our values

Independent of political, commercial, ethnic or religious objectives, CapaCare promotes the availability and quality of healthcare. We provide professional support and training on the basis of need, regardless of race, creed or nationality.

CapaCare follows a set of principles in our training programmes, research and capacity building. CapaCare values include:

- Collaboration with governments.
- Promotion of partnerships.
- Research oriented.
- Application of international standards.
- Sustainable results.
- Promotion of responsibility and empowerment.
- Promotion of professionalism.



STP-student Foday with nursing staff at Masanga Hospitals paediatric unit

Sierra Leone

In 2015, a local organisation, CapaCare Sierra Leone (CapaCare SL) was established, it is currently registered at the Ministry of Finance and Economic Development under registration number NNGO/634/2018-19. The purpose of the organisation is to oversee CapaCare's activities in Sierra Leone and to advise both the local management in Masanga and the International Board. CapaCare SL also works to locally raise funds and recruit health professionals in Sierra Leone to accomplish this purpose. The organisation actively promotes increased access to emergency surgical and obstetric care in Sierra Leone by strengthening national human resources for those services.

CapaCare – Project Locations

Training Locations

Since the start of the programme, Masanga Hospital has been the home of the Surgical Training Programme (STP). It is the place where the local management team is based and where all the students commence their basic training. The cooperation with Masanga Hospital makes it possible to provide, besides the theoretical and skills training, practical courses in basic surgical skills. After several weeks, the students are introduced to the wards, outpatient department and operating theatre.

After six months of basic training in Masanga, the students continue their clinical rotations in partner hospitals, for three rotations of five to six months each. In this period, they will receive further practical training and gain experience in management of obstetric and surgical emergencies.

After successful completion of the rotations, the students take their final oral and written examinations at the end of year two, conducted by the Ministry of Health and Sanitation (MoHS) in collaboration with CapaCare. Upon graduation, the students enter a one-year housemanship stage (six months of obstetrics and six months of surgery) in the two largest tertiary governmental hospitals in Freetown. The housemanship is organised by the MoHS.

Fifteen of the surgically most active hospitals in Sierra Leone with experienced surgeons, obstetricians and/or surgically inclined Medical Officers were active partners of the Training Programme in 2019 (Figure 3). These partner hospitals are selected on the basis of their surgical capacity, coverage of supervision, and the availability of surgical tutors. The hospitals and their national and international staff have offered their premises to the Programme, ensuring that each candidate is exposed to the most skilled tutors presently available in the country.

Graduate locations

After successful completion of the training, the Surgical Assistant Community Health Officers (SACHOs) are posted by the government to the different hospitals (Figure 4). The number of hospitals where the SACHOs are posted has increased from 17 in 2018 to 25 in 2019. The hospitals where the SACHOs are posted consist of both governmental and private non-profit hospitals and have an essential role in the provision of emergency obstetric and surgical care in the country.



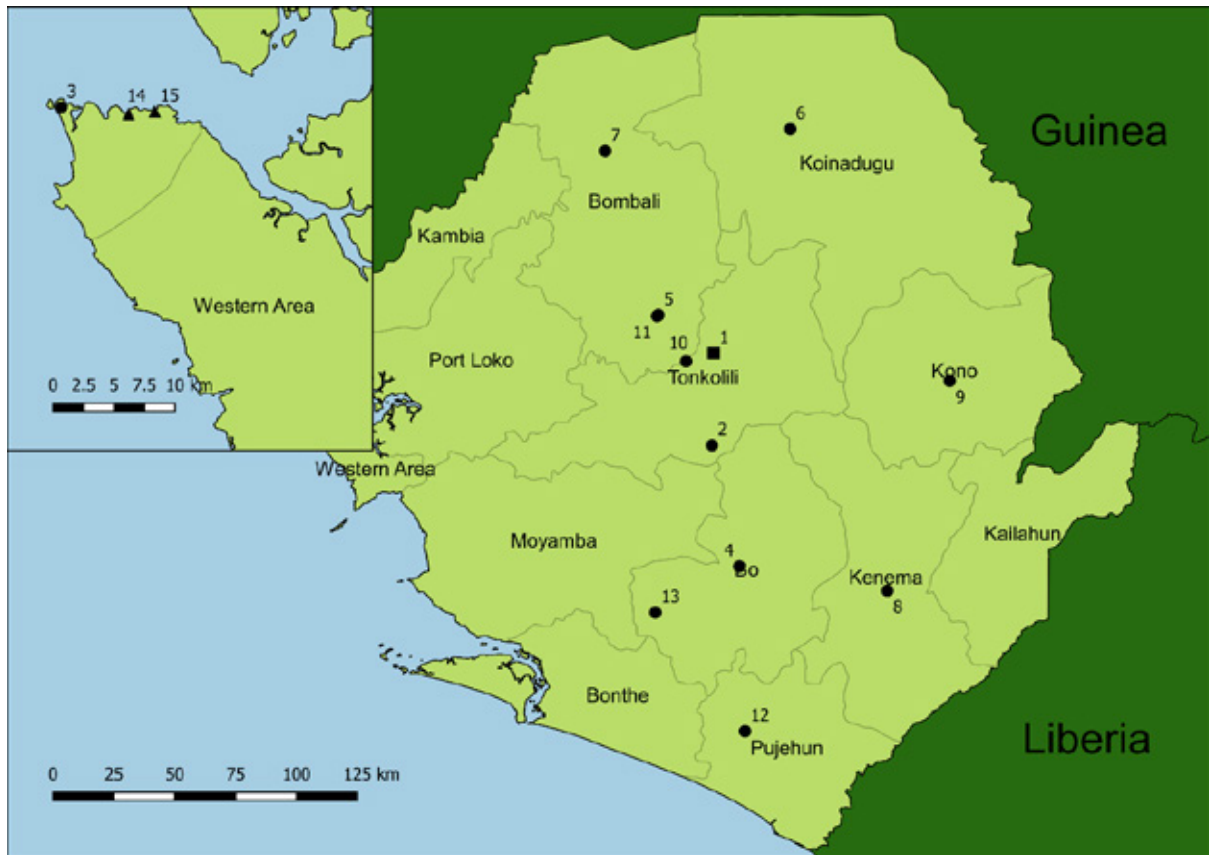


Figure 3. Training hospitals in 2019.

■ **Basic training**

- 1. Masanga Hospital

● **Clinical rotations**

- 2. Lion Hearth Medical Center Yele
- 3. Aberdeen Womens Clinic Freetown
- 4. Bo Governmental Hospital
- 5. City Garden Clinic Makeni
- 6. Kabala Governmental Hospital
- 7. Kamakwie Mission Hospital

- 8. Kenema Governmental Hospital

- 9. Koidu Governmental Hospital
- 10. Magburaka Governmental Hospital
- 11. Makeni Governmental Hospital
- 12. Pujehun Governmental Hospital
- 13. Serabu Catholic Hospital

▲ **Housemanship**

- 14. Connaught Freetown
- 15. PCMH Freetown

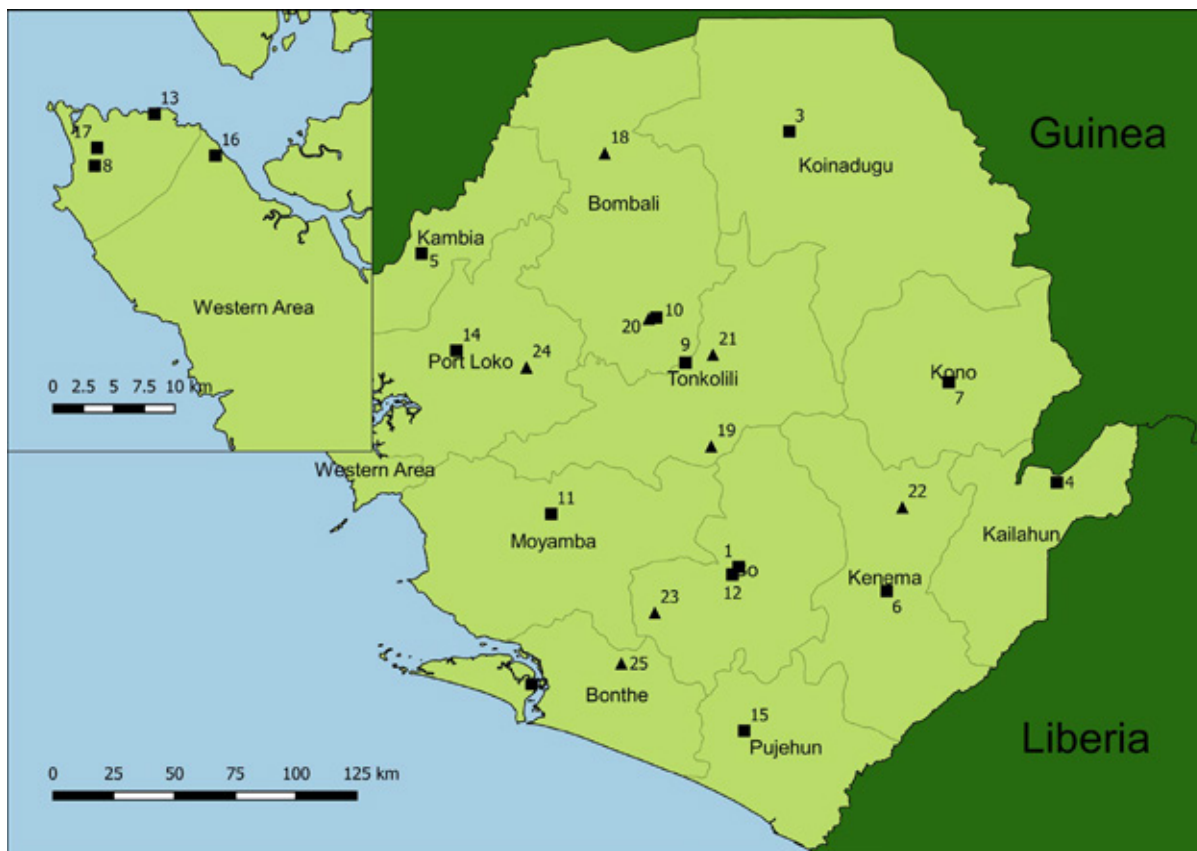


Figure 4. Location of graduates (SACHOs) in 2019.

- | | |
|--|---|
| <ul style="list-style-type: none"> ■ Governmental 1. Bo Governmental Hospital 2. Bonthe Governmental Hospital 3. Kabala governmental Hospital 4. Kailahun Governmental Hospital 5. Kambia Governmental Hospital 6. Kenema Governmental Hospital 7. Koidu Governmental Hospital 8. Lumley Governmental Hospital 9. Magburaka Hospital 10. Makeni Governmental Hospital 11. Moyamba Government Hospital 12. Njala Government Hospital 13. PCMH Freetown 14. Port Loko Hospital | <ul style="list-style-type: none"> 15. Pujehun Government Hospital 16. Rokupa Hospital, Freetown 17. Wilberforce Military Hospital ▲ Private non-profit 18. Kamakwie Wesleyan Hospital 19. Lion Heart Medical Center, Yele 20. Magbenteh Makeni 21. Masanga Hospital 22. Panguma Mission Hospital 23. Serabu Catholic Hospital 24. St. John of God Hospital, Lunsar 25. UMC Hospital Matru |
|--|---|

Output

Students and Graduates

At the beginning of 2019, thirty-four students were participating in the STP and since the start of the Programme, 31 graduates had been posted in hospitals by the MoHS (Table 1).

Sixteen new students were selected and started in April (8) and October (8). During the year, **nine students graduated** while three students dropped out of the Programme. By the end of 2019 thirty students were still in basic training (first two years of the Programme), and seven were conducting their internships in Freetown (housemanship students).

Of the forty graduates, twenty-four SACHOs are posted to governmental hospitals. Eight are currently working in private non-profit hospitals. For five SACHOs, placement is still pending. One SACHO has sadly passed away in 2019. In addition, two medical doctors (MDs) completed the STP. One is specialising in surgery in the UK and is planning to come back to Sierra Leone as a surgeon. Both MDs are conducting research on surgical outcomes in Sierra Leone. All but five of the graduates are posted in hospitals outside of Western Area.

Surgical

Since the start of the Programme in 2011, the students and graduates combined have participated in and performed more than **56,000 surgeries**. The total **number of operations for 2019 alone was 8,516**. Students within the initial two years of training performed 4,864, those in housemanship 1,409, while the graduates performed 2,243.

Out of the 2,243 procedures registered by graduates in 2019, only 154 procedures (6.9%) were performed within Western Area. 552 of the surgeries performed by graduates outside of Western Area were caesarean sections. However, at the time of writing of this annual report some data from the graduates was yet to be submitted. This must be taken into account when interpreting these numbers.

Role and Procedures

The most common procedure for both the students and graduates in 2019 was **caesarean section**. The graduates performed over **80% of their surgeries fully independently**.

	January 2019		December 2019	
	Male	Female	Male	Female
Basic training (2 years)	24	1	28	2
Housemanship (3rd year)	9	0	7	0
Graduates (SACHO/MD)	26/2	3/0	35/2	3/0

Table 1. Number of Students in basic training, housemanship and graduates

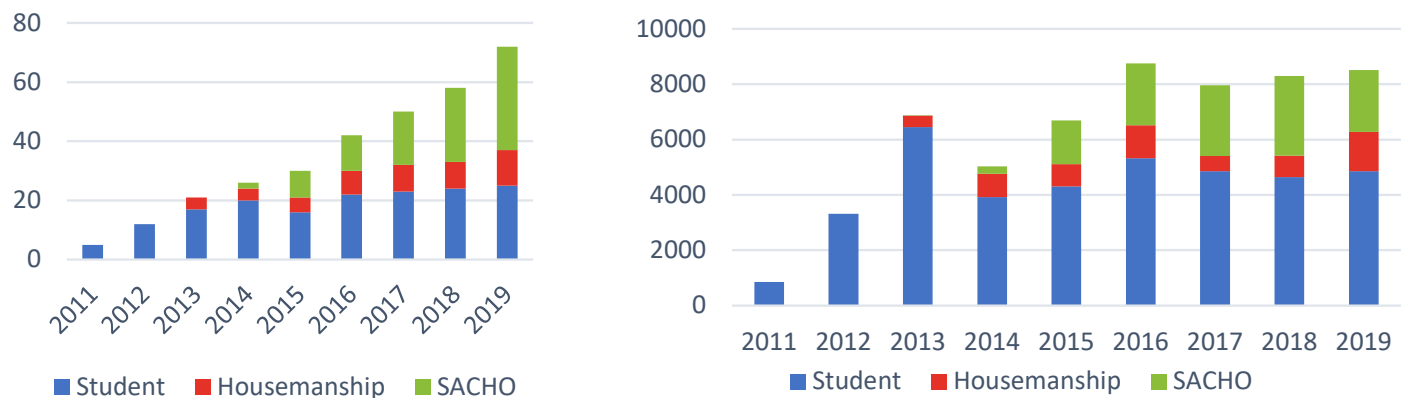


Figure 5. Accumulated number of students, interns, and graduates (left) in the Programme and annual volume of surgical activity (right) since the start of the Programme in 2011.

Students (incl. housemanship)				Graduates		
No	Procedure	n	%	Procedure	n	%
1	Caesarean section	2,215	35.3	Caesarean section	583	26.0
2	Inguinal hernia repair	1,175	18.7	Inguinal hernia repair	486	21.7
3	Laparotomy	272	4.3	Appendectomy	137	6.1
4	Appendectomy	233	3.7	Incision & drainage	68	3.0
5	Other soft tissue surgery	146	2.3	Laparotomy	57	2.5
6	Hysterectomy	145	2.3	Skin graft	56	2.5
7	Dilatation and curettage	141	2.2	Scrotal hydrocele	55	2.5
8	Skin graft	121	1.9	Strangulated hernia repair	38	1.7
9	Debridement	117	1.9	Debridement	35	1.6
10	Scrotal hydrocele	113	1.9	Hysterectomy	34	1.5
	Total	4,678	74.6	Total	1,492	66.5

Table 2. Top 10 procedures for students and graduates in 2019.

Students (incl. housemanship)				Graduates		
No	Role	n	%	Role	n	%
1	Surgeon independent	1,898	30.4	Surgeon independent	1,827	81.5
2	Surgeon supervised	1,879	30.1	Assisting	156	7.0
3	Assisting	1,736	27.9	Surgeon supervised	151	6.7
4	Observing	720	11.6	Observing	109	4.9
	Total	6,233	100.0	Total	2,243	100.0

Table 3. Role during operation for students and graduates in 2019.

Tutors and Trainers

A core element of the STP is module-based training by international and national tutors. These training modules are conducted in Masanga by specialist gynaecologists, midwives, surgeons, tropical doctors, emergency doctors, radiologists, and nurses. In 2019, the international trainers came from Denmark, Germany, the Netherlands, Norway, Sweden, and the United Kingdom. All international tutors are engaged on a voluntary basis. CapaCare provide support for transportation, accommodation, visa and vaccines. The local tutors receive an honorarium for the training they provide.

In 2019, 22 training modules were conducted, compared to 24 in 2018. However, the number for 2019 would have been slightly higher if the planned courses for November and December had taken place. These were however cancelled due to the Lassa outbreak.

Apart from the trainers, there were also several support visits in 2019, mostly to offer mentoring and monitoring of the local administration and research related activities (Table 5). The majority of those visits have been externally financed. 1Giulia Mönnink*, Janine Martens*, Jurre van Kesteren*,), Bart-jan Metz (C)

Module	Trainees	Duration	Month	Tutor
MD Surgery Course	MDs	5 days	Jan	Dag Halvorsen (S), Maja Kjer Nielsen (S)
CPD Course Urology (Similar course was given 3 times)	SACHO, MD	3 x 2days	Jan/Feb	Dag Halvorsen (S)
Surgery & the abdomen	STP	15 days	Feb	Anthony Kamara (senior STP), Ella Teasdale (S), Hindowa Lavally (senior STP), Lesley Hunt (S), Maja Kjer Nielsen (S)
MD Emergency Obstetrics	MD	10 days	Feb	Frank van Raaij (G), Juul Bakker (T), Tairu Fofanah (senior STP)
Emergency obstetrics	STP	15 days	Feb	Josien Westendorp (G), Juul Bakker (T), Louise Nordström (M), Mohammed Tommy (senior STP)
CPD Orthopaedics	SACHO, MD	1 day	Feb	Conducted at Lunsar Hospital, by visiting orthopaedic surgeons.
CPD Hand trauma and Burn Care Course	SACHO, MD			ReSurge Africa, based at Holy Spirit in Makeni
Basic Surgical Skills	STP	15 days	Apr	Foday Ansuma (senior STP), Hindowa Lavally (senior STP), Laurie Faux (OT), Lesley Hunt (S), Øyvind Sandnes (S)
Pig course & resuscitation	STP	5 days	May	Foday Ansuma (senior STP), Hindowa Lavally (senior STP), Lesley Hunt (S), Markus Walsø (A), Øyvind Sandnes (S)
CPD Surgical Skills	SACHO, MD	2 days	May	Sunirmal Ghosh (S)
Basic Obstetrics	STP	3 days	May	Hanna Mathéron (T), Frederica Laurenti (M), and Tenneh Kamara (M)
Surgery & the abdomen	STP	1 July	20 July	Anthony Kamara (senior STP), Hindowa Lavally (senior STP), Katja Maschuw (S)
Surgical skills & the abdomen	MD	10 days	27 July	Foday Ansumana (senior STP), Lesley Hunt (S)
MD Emergency Obstetrics	MD	8 days	Sep	Alice Clack (G), Peter Scott (G)
CPD Emergency Obstetrics	SACHO, MD	2 days	Sep	Alice Clack (G), Peter Scott (G)
Emergency obstetrics	STP	15 days	Sep	Anne Husby (M), Marco Versluis (G), Solomon Barnes (senior STP)
Basic Surgical Skills	STP	15 days	Oct	Anthony Kamara (SACHO), Hjørdis Havdahl (OT), Lesley Hunt (S), Maja Kjer Nielsen (S), Tamba Kongoneh (senior STP)
Pig course & resuscitation	STP, MD	5 days	Oct	Aatish Patel (EM), Amara Conteh (SACHO), Anthony Kamara (SACHO), Laura Thomson (A)*, Lesley Hunt (S), Yolande Squire (A), Åsmund Øpstad (A)
Basic Obstetrics	STP	5 days	Nov	Juul Bakker (T)
Anaesthesia & Emergency Medicine	STP	5 days	Nov	Aatish Patel (EM), Julius Kaipumoh (senior STP), Laura Thomson (A)*, Thomas Bundor (senior STP), Yolande Squire (A)
CPD Anaesthesia & Emergency Medicine	SACHO, MD	5 days	Nov	Aatish Patel (EM), Laura Thomson (A)*, Yolande Squire (A)
Ultrasound training	SACHO, MD	5 days	Nov	Taymoor Asghar (R), Thomas Finsen (R)

Anaesthesiologist (A), Emergency Medical Doctor (EM), Gynaecologist (G), Medical Doctor (MD), Midwife (MW), Orthopaedic surgeon (O), Scrub nurse (OT), Plaster cast specialist (PS), Radiologist (R), Surgeon (S), Surgical Assistant Community Health Officer (SACHO), Surgical Training Program students (STP), Tropical Doctor (T)

Table 4: Rotations of tutors in 2019.

Purpose	Duration	Month	Support staff & Research students
Research and Project support	2 weeks	Feb	Håkon Bolkan (B, NTNU)*
Research and Project support	1 week	Feb	Alex van Duinen (B, NTNU)*
Graduation April 2019	1 week	Apr	Brynjulf Ystgaard (B), Håkon Bolkan (B), Håvard Adde (B)
Support during NORAD Audit and getting to know CapaCare SL	1 week	June	Emma Margrett (C)
NORAD Audit	1 week	June	Knut Winther*, Titti Brekken*
Research	2 months	Mid Aug/ mid Oct	Juul Bakker
Research Prevalence study	3 months	Sep / Nov	Daan van Herwaarden*, Daniel van Leerdam*, Giulia Mönnink*, Janine Martens*, Jurre van Kesteren*, Karel Lindenberg*, Martin Grobusch*, Mia Nyeng*, Sofie Mack Løvdal*
Research and Project support	1 week	Oct	Håkon Bolkan (B)*
Research and Project support	1 week	Oct	Alex van Duinen (B, NTNU)*
Research	1 week	Nov	Bryony Dawkins*
Research and Project support	1 week	Nov	Alex van Duinen (B, NTNU)*
Production PR materials	1 week	Nov	Magnus Endal (B)
Research	1 week	Nov	Grethe Heitmann*
Finance and Project Support	1 week	Dec	Annemarie van Duinen (C), Bart-jan Metz (C)

*External funding, Board (B), CapaCare staff (C), Norwegian University for Science and Technology (NTNU)

Table 5: Staff and Research visits in 2019.



STP-student Phillip charting at Masanga Hospital

Media

Online

CapaCare's main communication channels are through our website www.capacare.org and via social media. According to Google Analytics our website was viewed more than 23,000 times, by more than 16,000 individual users. Our Facebook site currently has 1,088 followers and our most popular post reached more than 6,400 users. We are also present on Instagram, YouTube and Twitter.

Publications

Bold – Contributions from CapaCare Board members, trainers, trainees and graduates.

Scientific peer-review publications:

1. Holmer H, **Kamara MM, Bolkan HA, van Duinen A**, Conteh S, Forna F, Hailu B, Hansson SR, **Koroma AP, Koroma MM**, Liljestrand J, **Lonnee H**, Sesay S, Hagander L. The rate and perioperative mortality of caesarean section in Sierra Leone. *BMJ Glob Health*. 2019; 4(5):e001605
2. Drevin G, Mölsted Alvesson H, **van Duinen A, Bolkan HA**, Koroma AP, Von Schreeb J. "For this one, let me take the risk": why surgical staff continued to perform caesarean sections during the 2014-2016 Ebola epidemic in Sierra Leone. *BMJ Glob Health*. 2019 Jul 19;4(4):e001361
3. **Svendsen ØV**, Helgerud C, **van Duinen AJ**, Salvesen Ø, George PM, **Bolkan HA**. Evaluation of a surgical task sharing training programme's logbook system in Sierra Leone. *BMC Med Educ*. 2019 Jun 11;19(1)
4. Liu B, Hunt LM, Lonsdale RJ, Narula HS, Mansaray AF, Bundu I, **Bolkan HA**. Comparison of surgical skill acquisition by UK surgical trainees and Sierra Leonean Associate Clinicians in a task sharing program – an experimental study. *British Journal of Surgery Open*, 2019
5. **van Duinen AJ**, Kamara MM, Hagander L, **Ashley T, Koroma AP**, Leather A, Elhassein M, Darj E, Salvesen Ø, Wibe A, **Bolkan HA**. Caesarean section performed by medical doctors and associate clinicians in Sierra Leone. *British J Surg*. 2019 Jan;106(2):e129-e137.

Scientific presentations / invited speakers from CapaCare:

1. van Duinen A [Research in Sierra Leone] **Masanga Denmark** annual meeting, Copenhagen, Denmark, 9th March 2019 – *Oral Presentation*
2. Bolkan HA. [CapaCare - Capacity building for a better future] **Health Innovation and Entrepreneurship, NTNU, Trondheim, Norway**, March 2019 – *Oral Presentation*

3. van Duinen A [Access to Surgical Services in Sierra Leone] **Global Health Norway Conference, Bergen, Norway**, 2nd August 2019 – *Oral Presentation*
4. van Duinen A [Global Helse: Erfaring fra Sierra Leone] **FIRM Konferanse med årsmøte, Trondheim, Norway**, 31th August 2019 – *Oral Presentation*
5. van Duinen A, Hagander L, Bolkan H [Maternal and perinatal outcome after caesarean sections in Sierra Leone: A prospective multicenter study comparing medical doctors and associate clinicians] **48th World Congress of Surgery, Krakow, Poland**, 15th August 2019 – *Oral Presentation*
6. van Duinen A, Hagander L, Bolkan H [Maternal and perinatal outcome after caesarean sections in Sierra Leone] **Regional forskingskonferanse, Kristiansund, Norway**, 2nd October 2019 – *Oral Presentation*
7. van Duinen A [Maternal and perinatal outcome after caesarean sections in Sierra Leone] **3rd Annual Global Surgery Research Group – Surgical Technologies, Freetown, Sierra Leone**, 11th November 2019 – *Oral Presentation*
8. Bakker J [Surgical productivity and influencing factors in Sierra Leone] **3rd Annual Global Surgery Research Group – Surgical Technologies, Freetown, Sierra Leone**, 11th November 2019 – *Oral Presentation*
9. van Duinen A [Scaling up access to safe Caesarean Sections with a focus on service delivery] **Averting an Impending Cesarean Section Disaster in LMICs Gates Foundation/ USAID, New York, USA**, 3rd December 2019 – *Oral Presentation*

Posters / Presentations

1. GjØra A, Lindheim-Minde B, van Leerdam D, Hunt L, Bundu I, Bolkan H [Changes in surgical operative volume in Sierra Leone between 2012 and 2017] **Symposium: Reaching the hard-to-reach. Sexual and reproductive health and rights in rural populations, Copenhagen, Desember**, 20th September 2019 – *Poster*
2. van Duinen A, Westendorp, Bolkan H [Perinatal outcomes of caesarean sections in Sierra Leone: A prospective multicenter observational study] **Global Health Day, Trondheim, Norway**, 27th October 2019 – *Poster*

3. GjØra A, Lindheim-Minde B, van Leerdam D, Hunt L, Bundu I, Bolkan H [Changes in surgical operative volume in Sierra Leone between 2012 and 2017] **Global Health Day, Trondheim, Norway**, 27th October 2019 – Poster

Online Media

C-sections by trained health officers a safe alternative - Nancy Bazilchuk

<https://norwegianscitechnews.com/2019/02/c-sections-by-trained-health-officers-a-safe-alternative/>

Man who delivered countless Milton Keynes babies achieves National Gallery honour - A consultant who helped thousands of pregnant women deliver healthy babies in MK has achieved National Gallery fame.

<https://www.miltonkeynes.co.uk/news/man-who-delivered-countless-milton-keynes-babies-achieves-national-gallery-honour-77231>

Kirurg Håkon Bolkan tildelt Melvin Jones Fellow
<https://www.lions.no/club/show/Orkdal/72480/72518>

Surgical community health officers in Sierra Leone serving the community and saving lives

<https://sierraleone.unfpa.org/en/news/surgical-community-health-officers-sierra-leone-serving-community-and-saving-lives>

Lassa Fever: Dutch hero Doctor, Dr. Wouter Nolet, dies of disease

<https://asadnaveed.com/lassa-fever-dutch-hero-doctor-dies-in-sierra-leone/>



Partners and Donors

Partners and Donors

CapaCare's **main financial partners** are the United Nations Population Fund (UNFPA), **Torun and Ole's Stiftelse** and the **Norwegian Agency for Development Cooperation** (NORAD). All main sponsors continued to support CapaCare in 2019. The **Norwegian University of Science and Technology** (NTNU) and Trondheim University Hospital, **St. Olav** have contributed with funds for evaluation of the Programme **via two PhD scholarships, funding the development of an app for data collection and by allowing employees paid leave to take part in the training.**

As an **Implementing Partner of UNFPA** CapaCare has been able to **strengthen relations with the Ministry of Health and Sanitation** in 2019. Annual and quarterly plans and budgets are submitted to the UNFPA, and all spending in Sierra Leone is audited by an international accounting firm.

Masanga Hospital Rehabilitation Project continues to be the main partner in Sierra Leone together with the Sierra Leonean Ministry of Health and Sanitation (MoHS). The MoHS continues to **grant three-year paid study leave** for the Community Health Officers enrolled in the Programme from the governmental sector. The Ministry also takes part in interviewing new candidates and as exam invigilators. Finally, it is the Ministry that oversees the housemanships - the last part of the training. To date, there has been **good cooperation** with the Ministry to ensure local ownership of the Programme. CapaCare has also received substantial support from **private donors.**



Ward-rounds at Masanga Hospitals Maternity Unit

Financial Overview

Both the financial report of CapaCare Norway and CapaCare Sierra Leone will be made available online at www.capacare.org once finalised.

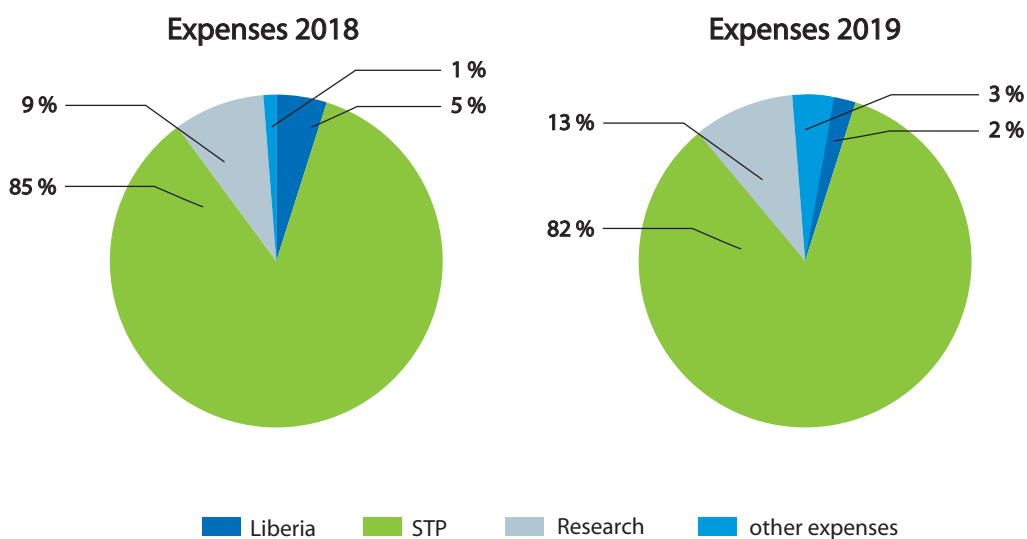
Income

Income in 2019 was 4.5 million NOK the same as in 2018, of which 1.5 million NOK was received in Sierra Leone. The major part of the income was for the Surgical Training Programme in Sierra Leone and was donated by NORAD and UNFPA. Furthermore, several research institutions donated

for research projects: the Lærdal Foundation, Linköpings University and Surgeons OverSeas.

Expenses

Expenditure in 2019 was 4.3 million NOK compared to 4.2 million in 2018, an increase of 1%. In both years the majority of the expenses were spent on the Surgical Training Programme in Sierra Leone.



Research

In 2018 a team from CapaCare conducted a nationwide surgical mapping of Liberia. All surgical facilities in the country were visited and comprehensive data on surgical infrastructure, human resources and operative volumes were collected. In April 2019 CapaCare board members visited Liberia to share preliminary findings from the surgical mapping with the Ministry of Health. Discussions on how to act on the data and address the issue of low operative volumes were initiated during this visit.

In November representatives from the board returned to Liberia to continue the discussions and share the research findings with a broader set of stakeholders. The results were discussed with representatives from the Liberian Medical and Dental Council, the Liberian Medical and Dental Association and the National Public Health Institute. The research provides detailed information on the current situation and can function as a roadmap on how to develop the surgical system in Liberia. Conversations on how to utilise this information will continue in 2020.

Purpose	Duration	Month	Start up and Research
Research and Project support	2 weeks	April	Mark Deenize Oghogho
Research and Project support	1 week	April	Brynjulf Ystgaard (B), Håkon Bolkan (B), Håvard Adde (B)
Research and Project support	4 weeks	October	Markus Werz
Research and Project support	1 week	Nov	Alex van Duinen (B, NTNU)*, Håvard Adde (B) Magnus Endal (B)

Table 6. Start up and Research visits Liberia 2019.



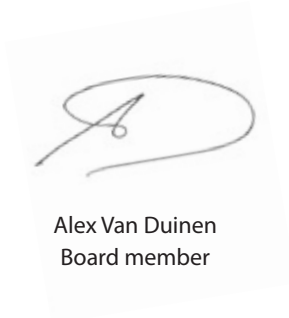
Central Monrovia

**We want to thank everybody that has contributed to the
Programme for the support that we have received!**

CapaCare Board
Trondheim, Norway
Masanga, Sierra Leone
May, 2020



Håkon Angell Bolkan
Chair



Alex Van Duinen
Board member



Puck Hegeman



Bart Waalewijn
Board Member

*Pictures are taken by Magnus Endal, CapaCare trainers and local team.
All patients have consented in the use of the photos.*



CapaCare Annual Activity Report 2019



www.capacare.org

Medical education and training to increase the number of skilled staff at district hospitals.

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Please visit CapaCare's page on Facebook.

