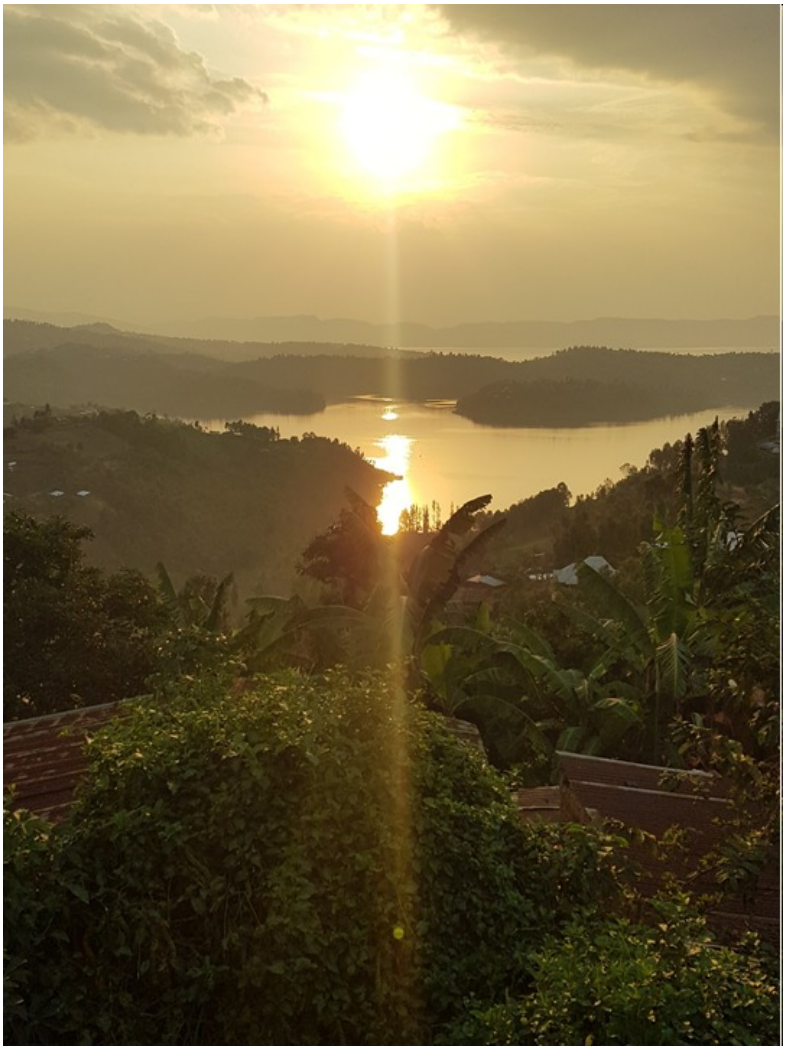
Here is my first newsletter from Rwanda!

For those who might not know I have taken 4-6 months off work to go where the need is greatest to serve as a missionary surgeon. The first trip is to Rwanda for two months and the second to Burma in late December. I'll aim for a newsletter every other week or so :) In the newsletter there will be occasional pictures that some readers might find disturbing. I think it's important to share them as they are part of the story of a very real patient and the suffering they have endured. Telling the patient's story highlights the reality of healthcare in low-middle income countries in which 5 billion people on our planet do not have access to safe, affordable, surgical care *(The Lancet commision on Global Surgery 2015).* Bjarte and I are traveling with TESFA, a Norwegian Christian medical organisation that supports surgeons traveling to Ethiopia and Rwanda with the hope of salvation and hope in health. Tesfa means hope in Amharic. I hope you find our work inspiring and please support TESFA if you feel moved to do so.



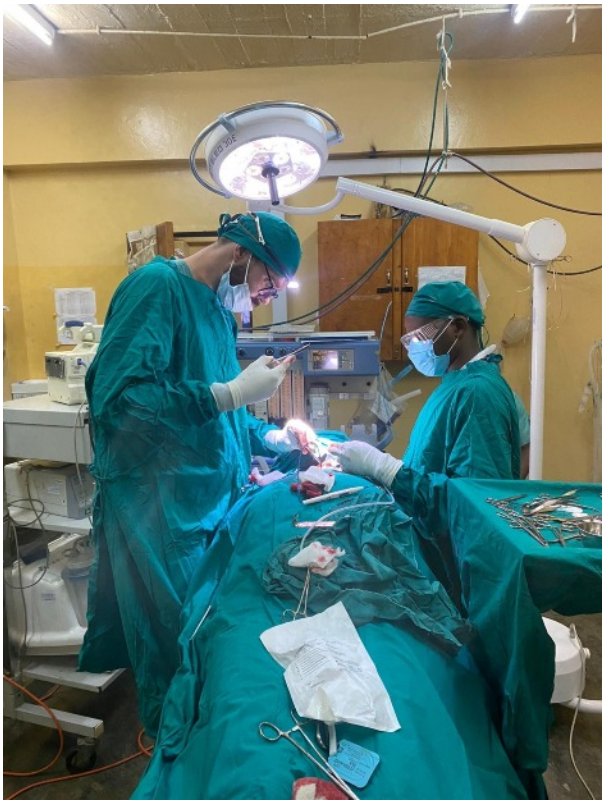
The view from Kibogora hospital. The mountains in the background are in the Congo.

Kibogora is situated on the western border of Rwanda right next to lake Kivu with clear views of the Democratic Republic of Congo. It's the rainy season but in practical terms it's summer with highs of 27*C and an hour of torrential rain around 2pm every day. It gives a pleasant coolness and freshness to the afternoon. The landscape is luscious green and mangos, papaya, tiny cute bananas and pineapples thrive in these conditions. Its genuinely paradise, which is exactly as our host, Dr Ronald described his home.

Ronald is a general surgery consultant and now chief of surgery, who until recently has been the only surgeon at Kibogora and Kibogora is the only surgical center in the whole of western Rwanda. That means that Ronald has the an exhausting task of covering upto 70-100 surgical patients. ALONE. 24/7. FOR YEARS spanning general surgery, Obs&Gyn & orthopedics. His only relief in this period has been when foreign surgeons come and help. I look forward to talking about how he stayed sane during that time. We in Norway and the UK talk about burnout. Its real and needs to be taken seriously but I doubt Dr Ronald took a resiliency course. I'll keep you posted. During the last year Ronald has lobbied the minister for health and gained funding for an orthopedic surgeon and one more general surgeon. Still that means he is on call every other day. In practice if the hospital is busy, the whole surgical team lives at the hospital. I'm really glad we can be here to allow him and his team to rest while we can lift the burden for a while (Galations 6:2).

Ronald did his surgery spesialisation at Soddo Christian Hospital in Ethiopia which Bjarte has visited for over 20 years to train local staff and operate. Ronald and Bjarte are clearly old friends and they laugh at each other in Amharic. As Bjarte is now training Ronald's own general surgery residents he is affectionately termed the surgical grandfather, a term Bjarte is taking some time getting used too.

We arrived in Kibogora mid afternoon last Tuesday. It didn't take long for the 6 bed emergency ward to fill up. Two car crash victims arrived and the first sustained blunt abdominal trauma and two long bone fractures. The first patient was unstable thus we perfomed a trauma laparotomy & splenectomy (opening the abdomen very quickly to stop the bleeding and removing the spleen). The second trauma patient had a minor injury, but nevertheless



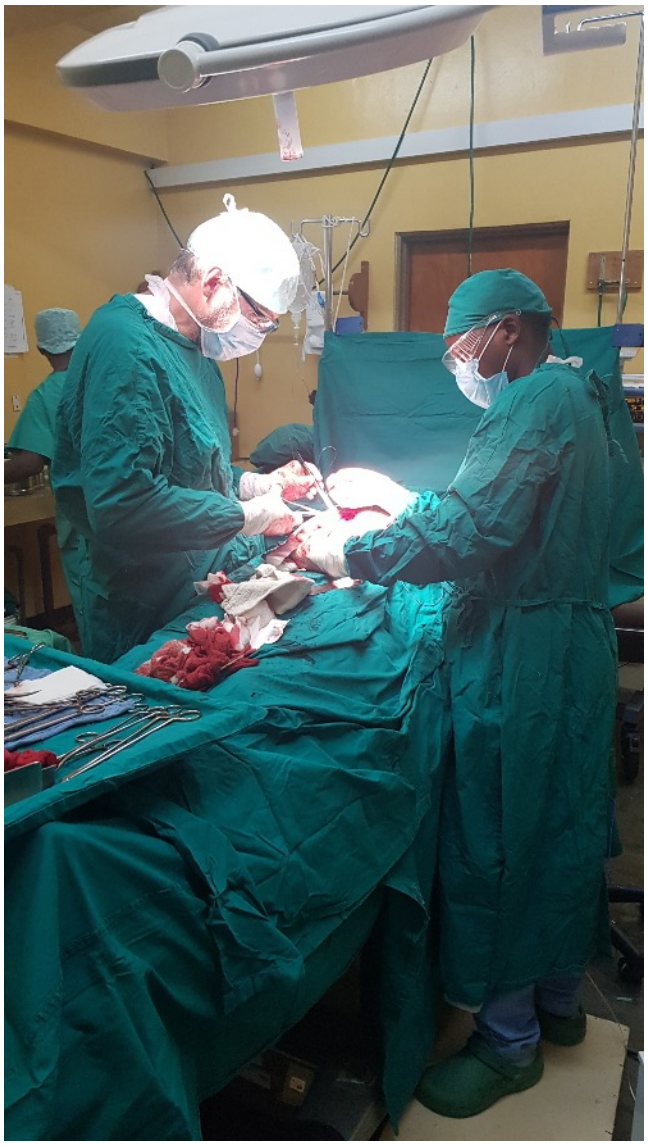
A senior resident and myself finishing up.

needed an operation. Our final patient was a cute toddler who presented with an incarcerated umbilical hernia (intestine had popped out of the belly button and couldn`t fit back in) and was getting febrile. The danger here being that the bowel would soon lose its blood supply and thus begin to die, ultimately a life threatening condition.

As the first patient was wheeled into theatre I experienced a huge level of discomfort in the discrepancy between trauma care in Norway and in Rwanda. To review: About 60 years old, high speed car crash. Spontaneously breathing, BT 70/60, Pulse rate 145, FAST positve (an ultrasound showing free fluid in the abdomen, most likely blood). GCS 13, and two long bone fractures. WIth this information we planned for a trauma laparotomy. No blood results were available.

In Norway the process would be slick and well drilled from the sci-fi trauma bay that is pre-warmed to body temperature and a CT machine being only a few steps away. Then comes damage control resuscitation with whole blood and knife to skin on induction of general anaesthesia. Now I am in an austere environment.

The sats moniter telling us the patients pulse and blood pressure is like the one your grandmother uses each morning. The patient on the table had one IV and had received 4 liters of crystalloid fluid holding a pressure of 90 systolic. I remembered Bjarte`s words “We are here to serve” which went against my instinct to redo the trauma exam myself, give blood(!), 2 plus IV access sites and up the tempo of the whole team. Instead i bit my tongue for what seemed to me like forever. After about 5 minutes of observing I finally muttered “shall we give blood?” The anethesiologist with big glasses replied “Not yet, she isnt so unstable”. Blood here is a precious resource. The anesthetist pushed ketofol (general anesthetic) and the pressure tanked. I opened the abdomen and found 2 liters of blood, we packed and on removal of the gauze pads the bleeding was in the left upper quadrant. I mobilised the spenorenal ligament and Bjarte in one swoop had the splenic hilum in his hand. Clamp, clamp, clamp, clamp, cut. Spleen out. Job done. Post op the patient got one unit of blood. Two days later the patient is in good shape and the fractures were treated by cast immobilisation.



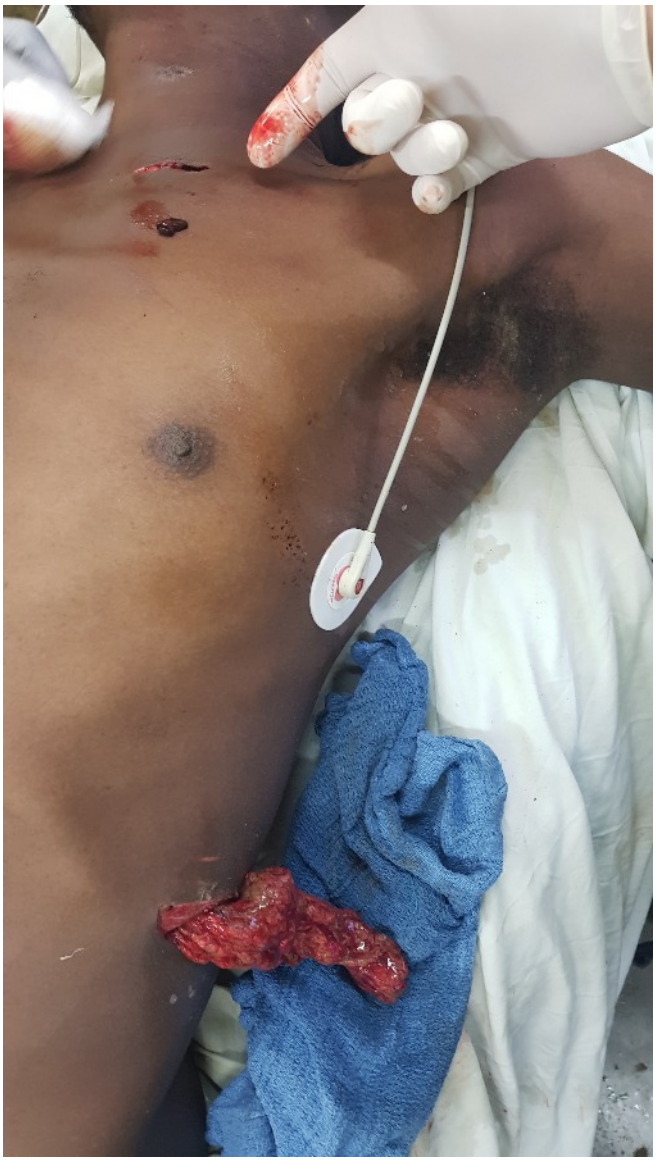
Bjarte doing what he is called to do.

The experience made me think about what is the minimum required to get a patient through an operation safely in the austere environment. Clearly the team are all masters of their craft in how to use and save resources as appropriate. “Optimal” in this scenario would mean emptying the hospital of blood, using extra monitoring equipment and many peripheral/central lines would mean the future trauma patients might go without. Also working at a higher tempo could lead to the team being fatigued on subsequent cases. If you are burnt out then you can't help patients.

Rationing in the medical world is a new concept to me.

All three patients were operated on and we were finished by 10pm! What an intro to Kibogora. It was probably the best way to get to know our colleagues at the hospital. They were not perturbed by us wandering into theaters and starting to operate. They were warm, welcoming and did a superb job. Actually the atmosphere was relaxed and the staff enjoyed being in the OR together. All of the patients did well post op and were discharged later the same week.

A few hours later at 7am a young man around my age lay on the same operating table. He had been violently stabbed in his left flank with abdominal contents hanging out of the wound and had a penetrating injury to his left neck (warning graphic image coming up). His carers were the same team from last night. Case in point about resources, and that includes human resources. The difference in Norway being there is no shift pattern here; all are on call 24/7. The surgical team is the surgical team. On the anesthesia side there are two anesthesiologists, 3 nurse anesthetists, 1 circulating nurse. No scrub nurse. We do that part ourselves.



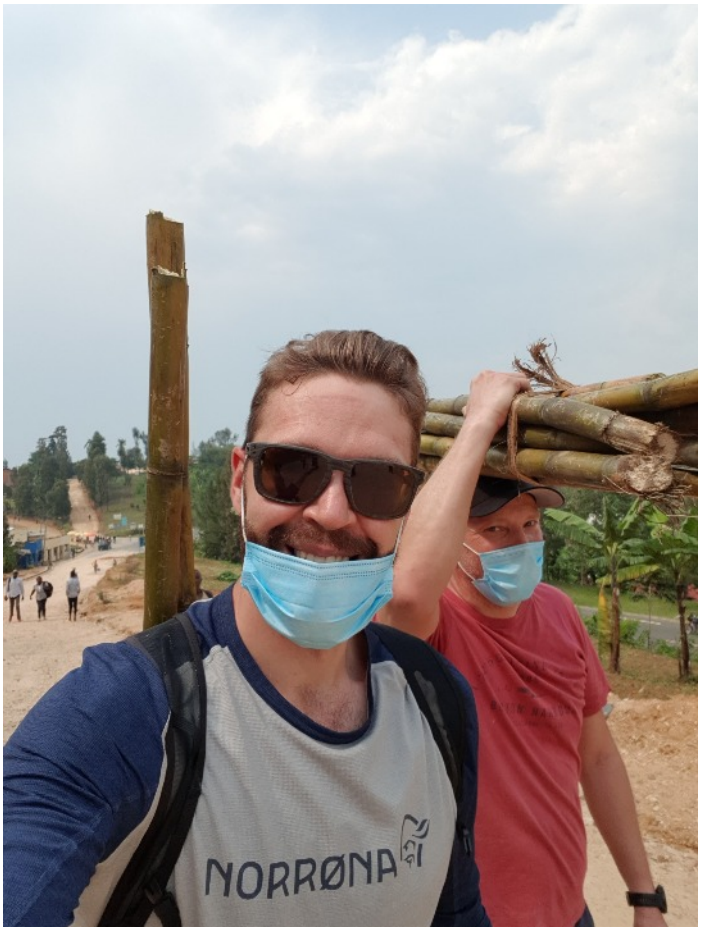
The picture doesn't need explaining. He needs an operation ASAP.

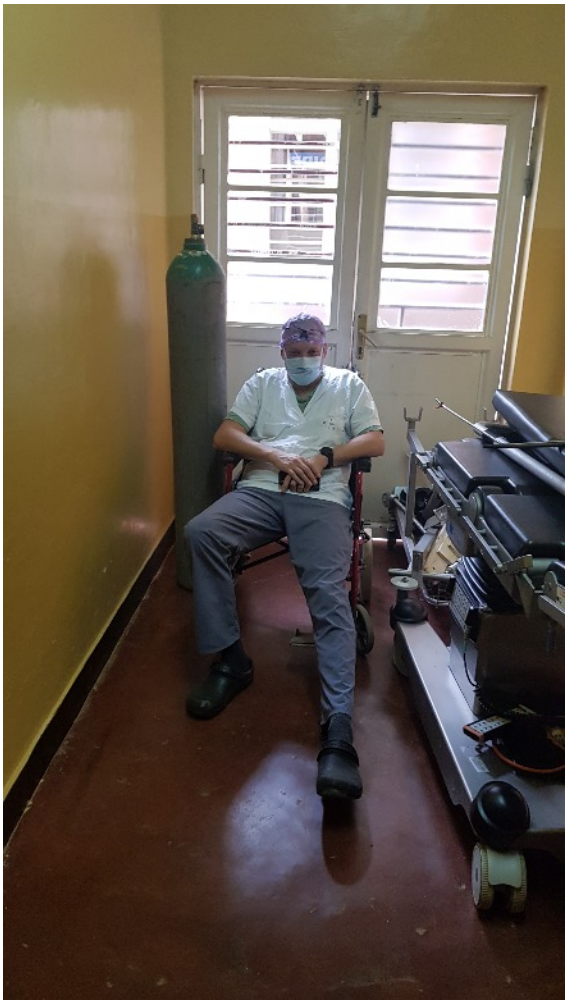
I always pray before operating. Andre Pare a French surgeon in the 1600`s famously said “I cut, God heals”. My usual habit is that as I rhythmically wash my hands, I use the few minutes available to pray something along the lines of “Heavenly Father thank you for (patient name), i pray that your presence is with them during the operation, guide my hands and the team to do Your healing work. To you be all the Glory amen.” In operating room 2 in Kibogora i had already scrubbed and was waiting for the patient to be anesthetised. The patient mentioned above was stable but needed exploratory surgery in both his neck and abdomen. Us surgeons are always raring to go, but the anesthesiologist with big glasses quietened the room and carefully placed the ventilator mask over the patient's mouth, then he began to pray. He gave thanks to God, prayed for our patient that he would be healed in spirit and by our work. I was touched that the patient also had the strength to pray with us. I thought how comforting it must be for him laying stretched out on the operating table, scared and critically ill, that the last few moments before he went to sleep was filled by the presence of Jesus bringing divine comfort, hope and peace.

I opened up the neck wound and thankfully despite penetrating beneath the platysma muscle no vital structures were injured. Once in the abdomen we resected the necrotic omentum (a fatty layer covering the intestines) and found a perforation of the sigmoid colon. A resident exclaimed “that would have killed him!”, surely it would have in a few days if we hadn't found and sewn up the hole. He recovered well and went home a few days later!

Hospitals are really houses of God. Where miracles happen. Where suffering is reduced. Where hope is found. The more suffering I see the more I am sure that God is close to the brokenhearted.

Despite working some long days in the hospital we also find time to relax. Ronald took us on a 12km walk to a local lodge down by the lake. On the way back he picked up some sugar cane which is surprisingly heavy! Like over 20kgs heavy! We then had to carry it around 5km home which was of course uphill. Bjarte tried to carry it on his head to the amusement of the locals.





The surgical grandfather checking out a wheelchair!

Here is a mini video of our first few days! More videos coming soon :D

https://www.instagram.com/p/CUvVmeoo_SO/?utm_medium=copy_link

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More next week!

all photos of patients have been taken with informed consent with the purpose of storytelling and/or teaching. Where applicable personal information and clinical details may have been altered to preserve patient confidentiality