Trip to Sogakope in Ghana: Flight from Zurich to Brussels, transfer and onward flight with Brussels Airline to Accra. At the gate in Brussels, I met Dr. Chakib Taleb. Chakib is an Algerian dentist, works for Ivoclar France and accompanies us to the dental clinic in Sogakope to get an idea of our work and the cooperation with "Ivoclar Joy in Africa", an aid and humanitarian program of Ivoclar AG in Lichtenstein. At the exit of the airport in Accra, Philipp, who had arrived two days earlier, was already waiting for us with the driver of the hospital, who took the three of us with all our luggage in his pick-up to Sogakope. In Ghana, too, traffic is increasing from year to year and the journey to Sogakope takes correspondingly longer. The reception by Faustina and Aksa, the two good souls who are responsible for the accommodation and well-being in the visitor camp, was, as always, very joyful and they offered us a little refreshment after the long drive through the dark night of Ghana.

We received a warm welcome from the dental clinic team on our first day of work. Unfortunately, they have been working with reduced staff for several weeks now, as three employees are on maternity leave. After a short round of introductions, we were given an overview of the condition of the equipment and facilities. It was immediately noticeable that new ceiling lights had been installed in the laboratory since our last visit. Unfortunately, spare parts such as luminaires or electronic control units are no longer available for the previous pendant lamps. Now lamps from the local market have been installed and hopefully spare parts will be available for a few years. Afterwards, the two dentists of the clinic, Dr. Akpaloo and Dr. Otu Kwaku, presented possible patient cases that should be treated during our presence. These patients came to the clinic over the day for further clarification. This allowed us to plan and organize the upcoming working and training days.

Many of the day clinic patients were already waiting on the benches in front of the clinic, who had to be examined and treated by the dental team one after the other. These patients usually come early in the morning before opening time and wait patiently hour after hour, some until late afternoon, lie down somewhere in the shade and take a nap until it is their turn.

Philipp and Chakib supported their Ghanaian colleagues wherever their help and advice was needed, while I took over the work in the laboratory with Atsu, the dental technician. Jennifer, the second dental technician, is not there now, she will not return from maternity leave until the end of December, I was told.

During every visit here to the clinic, it is already standard that we must carry out service and repairs on the equipment in addition to training and knowledge transfer. Unfortunately, there are practically no repair and service specialists for dental equipment in Ghana, at least not in the way as we have them in Switzerland. The susceptibility to repair is very high, partly due to the climatic conditions (high humidity, high temperatures and dust generation), but also partly due to carelessness during handling and operation. First, the mobile treatment unit, a gift from Ivoclar, which has only been in use for two years, had to be equipped with a new suction pump. Philipp was informed in advance that the suction of the device was no longer working properly and was thus able to organize a new pump from the manufacturer in Switzerland. The diocese's electrical engineer, Frenzy Wonder, was supposed to support us in this and gain experience on how to repair such a device. Unfortunately, he didn't even have the appropriate tools to change spare parts professionally on a device like this. From experience, I always have half a suitcase full of tools and repair utensils with me. With the

help of the operating instructions and the manufacturer's instructions, we were able to replace the new pump with the defective one and the device was ready for its use again for the "outreach" of the dental team. "Outreach" is a program financed and supported by "Ivoclar Joy in Africa" to educate in schools about oral hygiene and caries prevention.

FOR THIS TEACHER AND MOTHER, THEIR CHILDREN ARE ALWAYS WITH HER DURING HER WORK AT THE SCHOOL
TABLE AND CUSHIONS AS A LOUNGER DURING THE DENTAL TREATMENT

TOOTHBRUSHES AND TOOTHPASTES FOR OUTREACH THANKS TO CURAPROX OF SWITZERLAND

This program is carried out once a week by a team from the dental clinic. The team visits the schools in the immediate vicinity of the hospital, examines the children and pupils for their oral health, instructs them on the correct cleaning of the teeth, smaller caries lesions can be treated on site, and the fissures of the cleaned teeth are sealed to protect them from caries. In the event of major problems, patients are summoned to the clinic if the parents agree.

We were not the only guests in the hospital. A group of four electrical engineers from GSHT from Switzerland, https://www.gsht.ch/, as well as their partners in Ghana, technicians from HTU, were already busy mounting new electrical cables, and assembling a new power sub-distribution and a new fuse cabinet for the dental clinic and laboratory. The overhaul of one of the two emergency power generators was also on their work list.

Karl Pook, a Dutch anesthesiologist, came to this hospital regularly for many years to train the anesthesia team and made a significant contribution to improving the infrastructure of the anesthesia equipment. He retired five years ago, ending his commitment to the hospital. Now, during our presence, he has returned with his experience and knowledge in favor of the anesthesia department.

In the following three working days, the patients were called in for crown and bridge treatments. The Dentists Henry and Kwaku did their best to satisfy Philipp's watchful eye. Chakib was also an interested observer of what was happening in the clinic. I used the time until the first orders from the clinic were available for us in the laboratory, to demonstrate to Atsu, the dental technician, the way of processing a casted chrome-cobalt frame for a removable partial denture, a job I hadn't done for a good 30 years. Despite some compromises that I had to make due to the lack of utensils for this working process, I was very proud of the result and Atsu was happy to have seen and experienced all the work steps.

Today the whole hospital was again without electricity for an hour and a half, and that at the best and most work-intensive time of the day. Patients in the middle of treatment in the dental clinic and in the operating room, nothing worked anymore. How is this possible with two emergency power generators and a UPS system, a battery-operated emergency power supply, which bridges about one to one and a half hours.

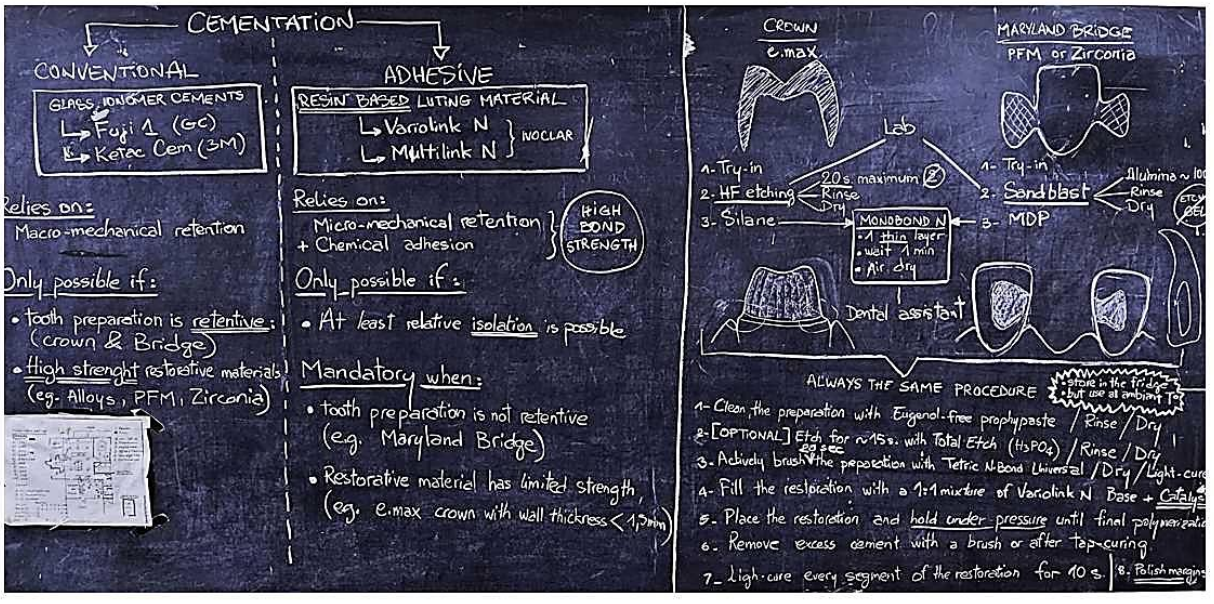
For the last three days, outreach missions were on the agenda from morning to noon. Dr. Henry Akpaloo and Dr. Kwaku Otu took turns as team leaders for these outreaches at the schools. They were also accompanied by Dr. Philipp Schneider and Dr. Chakib Taleb. For Chakib, the participation and insight into this prevention program was particularly important, as he will lead the "Ivoclar Joy in Africa" program in the future.

The day clinic is always open to patients with any problems in the oral cavity. For example, advanced abscesses, which usually require inpatient treatment. Injuries caused by accidents or even quarrels, as the following pictures show, a blow cut by a machete, just past the eye. The lower jaw was fractured too. Dr. Henry is also a trained oral surgeon, he treated and stitched the patient's cut. Unfortunately, he was unable to fix the mandibular bone because he had no osteosynthesis ligatures and fixation materials at his disposal.

HARDLY BACK FROM THE OUTREACH MISSION
DR. AKPALOO CARES FOR AN EMERGENCY PATIENT

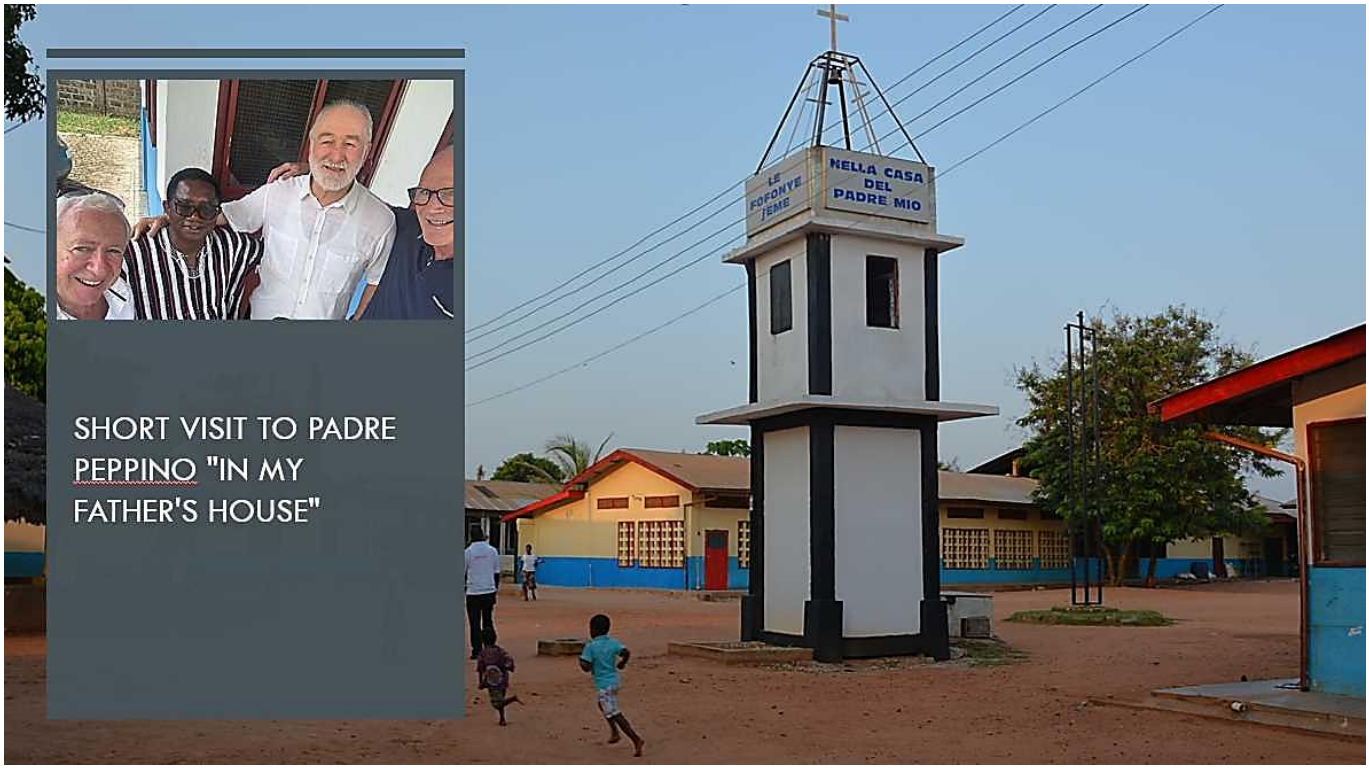
When we after work returned to our accommodations in the evening, there were plastic buckets filled with water in front of the room doors. I knew immediately what that meant, once again, we had no running water, so no showering, only washing and flushing the toilet with water from the bucket.

This Saturday Dr. Chakib Taleb had his last day. In the morning, he gave the entire clinic team a briefing on the use and processing of composites and cementing materials, visually very nicely displayed on the blackboard.



At the same time, Philipp and I were sitting in a meeting with Referent Sraha, the director of the diocesan hospitals, the administrator and the accountant of the Richard Novati Hospital, Ivy Damalie, deputy administrator. The accountant presented us with how the funds (grants) of the foundation "Ivoclar Joy in Africa" were used. It was a financial control, so that Philipp was able to confirm to the Ivoclar Board of Trustees that the payments to the hospital had been used correctly.

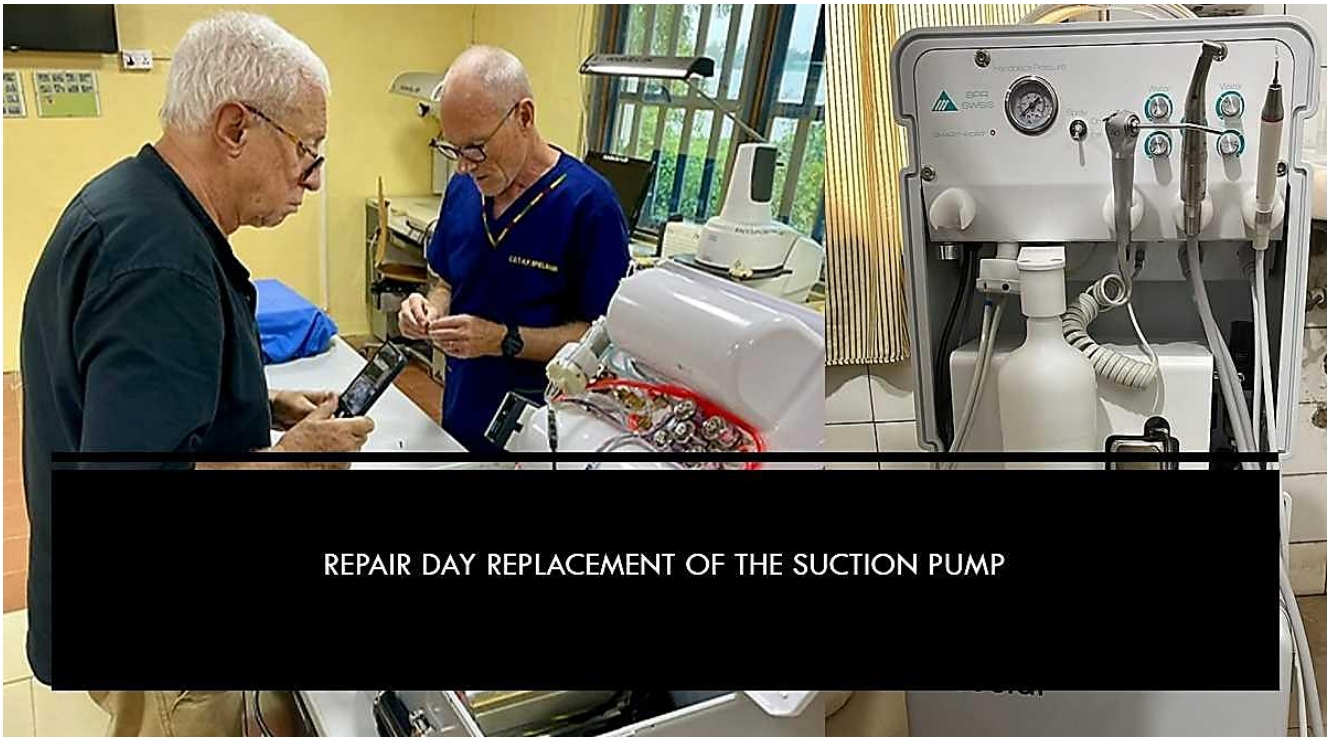
The topic of the meeting was also Philipp's personal donation of a mobile treatment unit, which he had brought with him in his flight luggage and wanted to donate to a hospital in the diocese. Ref. Sraha recommended the Sacred Heart Hospital in Abor as a location, as a prospective dentist is already working there. Immediately after the session, the Ref. drove with us to Abor, which is about an hour's drive from Sogakope, to visit the hospital. The Sacred Heart was founded in the 60s by Canadian sisters and is now under the responsibility of the diocese of Keta Atkatsi. In Abor is also the Children Village called "In My Father's House", a children's and youth home in which about 120 children live, orphans, but also children from families with very, very poor backgrounds. Here the children have a home, something warm to eat every day and access to education. An integrated school offers 800 children and young people from Abor and the surrounding area education from kindergarten to high school. "In My Father's House" is a project for holistic care for children. This Children's Village was founded in 2000 by the Comboni missionary Father Joseph Rabbiosi, also known as Father Peppino. Luca Cheda, a dentist from the Canton Ticino in Switzerland, and his wife Adelia have been visiting this facility regularly for many years, helping and striving for the dental health of these children, Luca also has his own mobile treatment unit for this purpose.

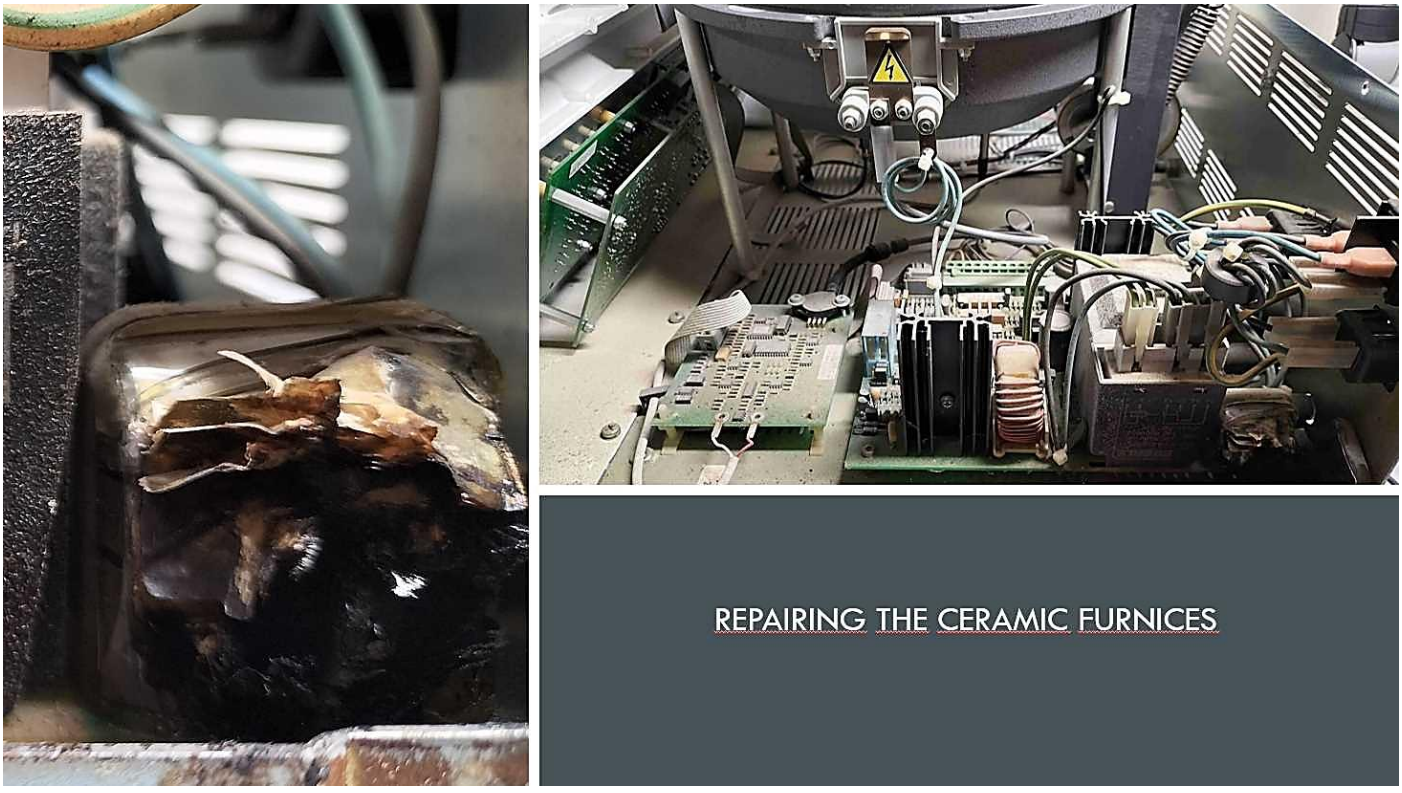


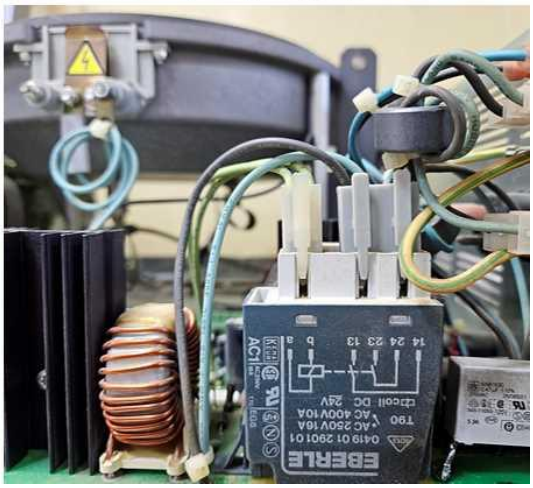
By lunch time we were back at the clinic and had the opportunity to say goodbye to Chakib. A driver from the hospital then took him to the airport in Accra.

Philipp and I used the quiet Sunday to work through our work list and prepare for Monday. Philipp got an overview of the available materials in the clinic and prepared a temporary prosthesis for an anterior dental bridge for a patient from Accra, who was supposed to start treatment two days earlier. This postponement put us under time pressure. It was a big job, and we only had Monday, Tuesday and Wednesday mornings available. I was busy repairing an air regulator. The drain valve of the condensation water separator had broken away. I managed to glue and fix the fracture with Araldite. Two years ago, an electrical overload caused short-circuit damage to all three ceramic furnaces. None of the devices worked anymore. The damage to the electronics was devastating. All capacitors close to the power inlet sockets were burned. Frenzy Wonder procured new capacitors on the Internet, no longer the originals, but similar ones. It was worth a try to solder them in and see what happened, and oh wonder, the devices were running again. An additional fault with the vacuum pump was reported, the vacuum was not reached in the given time. So, I had to keep looking at what is causing this error. After a long search and trial and error, I found what I was looking for. I checked all the device's internal vacuum lines and connections and found a tiny crack in the hose line in an inaccessible place. The damage was near a plug-in connection and the line was long enough so that I could cut off the torn piece and plug it back again. I had to realize that all these plastic pipes were quite brittle and could break with the slightest carelessness, which had happened to me too. With the installation of a new bridging piece, this error was also fixed.

After checking all the programs, we could reassemble the entire apparatus. At the end of the day two of the three ceramic furnaces were back into operation. The third will be repaired sometimes later.





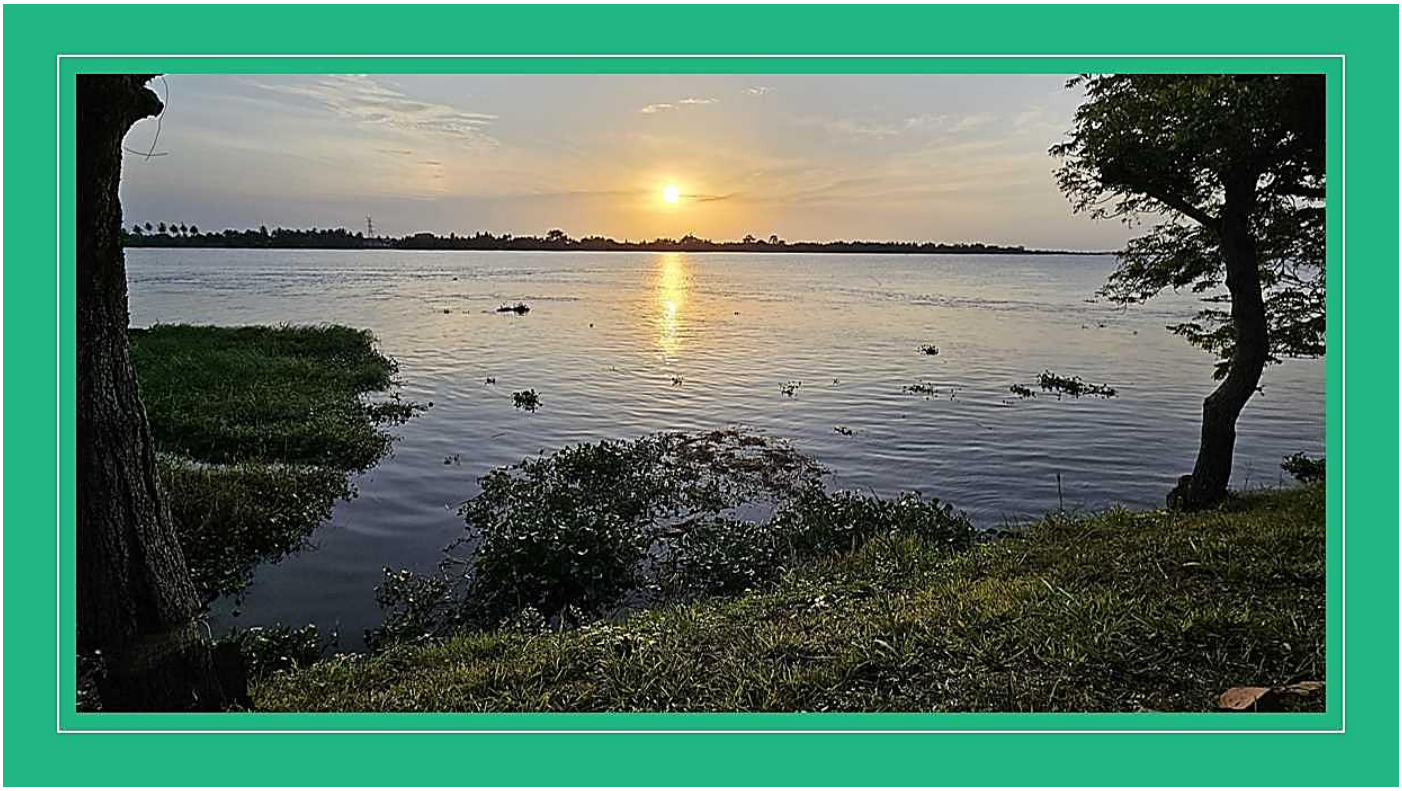


For us, to be able to carry out these repairs here as non-equipment technicians, a lively exchange with the manufacturers is necessary, who help us with tips and tricks and support us in the procurement of spare parts. This applies, for example, to Mr. Lechner from Ivoclar in Bürs, Mr. Kocher, former service technician at Kavo AG. Speaking about support, the laboratory and the clinic have so far only functioned thanks to the great support for a wide variety of consumables from Ivoclar Africa and its country manager, Mr. Stephan Fiorillo. The dental clinic here charges patients very modest prices for the treatments, respecting the poor income and low economic situation of the population. Certain medical treatments are covered by the state health insurance. Patients must pay for crown- and denture work themselves. I have calculated that the fees for dental treatment and dentures in the clinic of the RNCH will never cover the material and operating costs. Example: An e.max all-ceramic crown, clinic price CHF 44.00, partial material cost laboratory CHF 22.00. (Pressingot 17.50 Pressvest investment clay 1x 100 gr. 4.50) This is already 50% of the total price, without further procedural costs for the laboratory and clinic. Total denture: Clinic price CHF 49.50, cost of artificial teeth for a prosthesis, set teeth CHF 55.00 (average price anterior set 33.40, posterior set 21.60). The price of prosthetic teeth already results in a deficit. Single-tooth prosthesis (flipper): Clinic price CHF 8.25 (an artificial anterior tooth 5.50), which is already 66.65% of the final prosthesis price. And so on....

Since the hospital does not have staff costs for medically trained staff, doctors, nurses, midwives, etc., these are paid by the state, it is more or less feasible to provide emergency dental care to the poor population in and around Sogakope.

Daily minimum wage in Ghana in 2024, GHS 18.15 / CHF 1, annual salaries GHS 1'165 - 4'182 / CHF 64.00 - 230.00. In the future, too, the RNCH will not be able to function without financial and material support.

To round off the Sunday on the terrace of the canteen, an enjoyable sunset over the Volta.

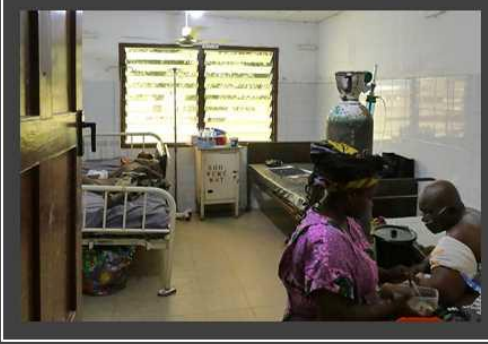


On Monday morning, the laboratory and clinic continued where they had left off on Saturday evening. Everyone was busy at their workplaces and knew what to do. Kwaku started with the patient, for whom a large anterior dental bridge had to be made. Philipp helped and observed. Atsu and I worked in the lab on two anterior crowns, which were cemented during the day. Atsu made very good progress. It's a real pleasure to see that.

The handover of Philipp's mobile treatment unit to the Sacred Health Hospital in Abor was also on the agenda for the day. Henry Akpaloo accompanied by Ivy Damalie went with us to Abor. The management of the hospital and the director of the diocese's health service, Referent Sraha, were present. Philipp explained in detail the structure and functions of the mobile treatment unit to the prospective dentist.

SACRED HEART
HOSPITAL
ABOR

A SHORT TOUR

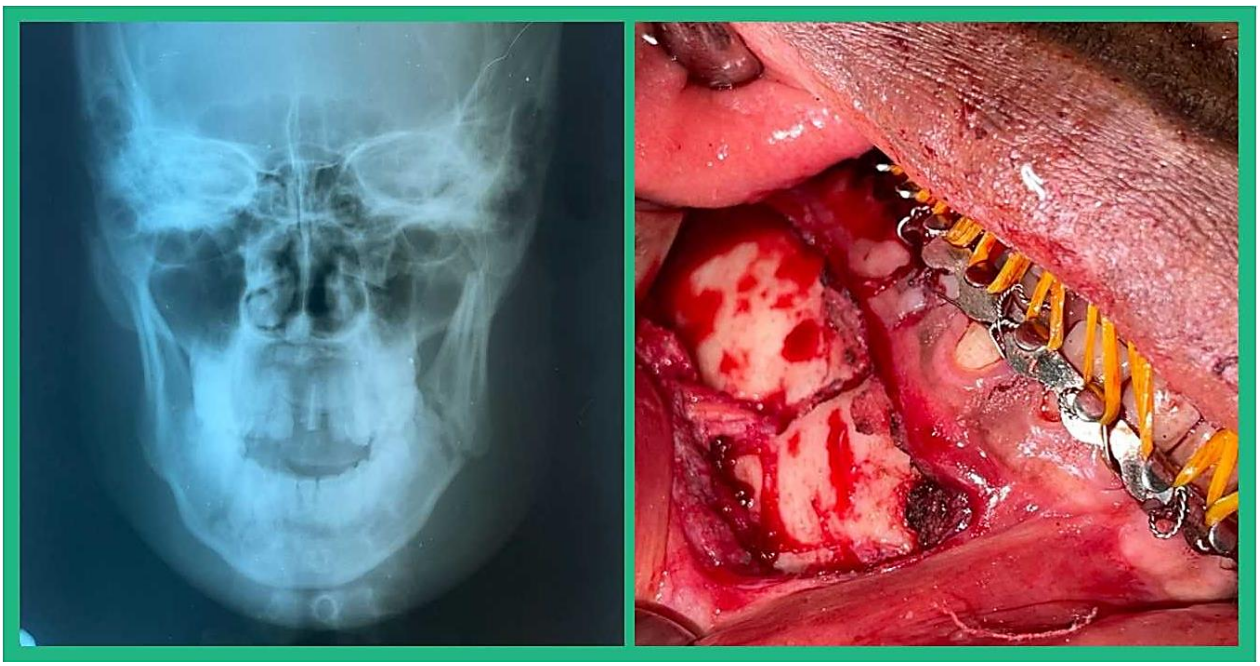


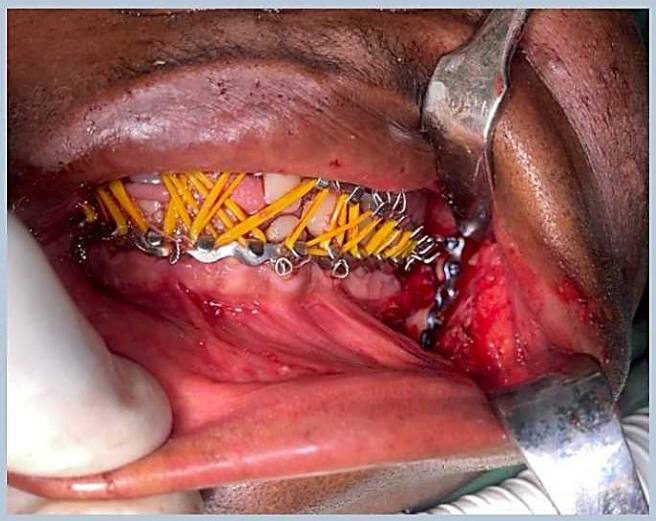
Since Saturday, a group of four Italian ophthalmologists has also been in the hospital. These doctors are at the RNCH for the first time and come primarily to treat and operate on the widespread eye disease cataracts. Unfortunately, they do the work here on their own, without the involvement of the local hospital staff in the sense of an exchange of expertise and training for the further development of Ghanaian specialists. They also complained

about the poor condition of the equipment and that most of the equipment was no longer usable.

A few more night working hours had to be invested for the processing of the anterior teeth bridge, and on Wednesday we worked until the last second before leaving for the airport for Accra.

Last week there was an emergency with a facial cut and a mandibular fracture. Due to the lack of osteosynthesis fixation plates, the bone of the lower jaw could not be treated. Dr. Akpaloo contacted a colleague at the University of Ho, who came to the clinic with the appropriate instruments and together they operated on the patient to fix the bone.





Team at the clinic, from left to right

Barbara Kafui Ametame, Solomon Elikem Adawu (Dentist in training at Abor)

Dr. Kwaku Otu-Danquah, Michael Kumafo, Senam Atsu Sewornu

Dr. Henry Selasie Akpaloo, Theresa Ebkang, Eric Awaga

November 2024 *Hans-Peter Spielmann*