Surmang Foundation: Volunteer Report 2018

Dr. Alyson McCabe
Dr. Justin Roos[1]

[1] Dr. Alyson McCabe (Family Physician) and Dr. Justin Roos (Emergency Medicine Resident Physician) Drs. McCabe and Roos served as volunteers at Surmang April – May 2018

[Introduction]

The Surmang Clinic is in a very remote part of a very remote part of Qinghai Province in western China. It is one of the most Tibetan places in the world, whose locals are about 99% Khampa Tibetan. The people are about ½ yak herding nomads and ½ farmers. Tibetan highland barley, yak meat and yak cheese are the staples of their diet. The altitude is roughly 4000m (about 13000') and there are several high passes en route –Ge-la is 6000m (or 19700') ed.

In April 2018, we traveled to the Surmang Dharma Sagara Clinic at Surmang Dutsi Til Monastery in Qinghai Province, China. We are two physicians from British Columbia, Canada: Dr. Alyson McCabe, a family physician and Dr. Justin Roos, an emergency medicine resident in his 4th year of specialty training at the University of British Columbia. Our role at the clinic was primarily to provide medical education to the two local physicians, Dr. Phuntsok Dongdrup, Surmang Clinic Director and Dr. Sonam Droga, Associate Clinic Director. They are two very experienced senior physicians with strong backgrounds in Tibetan and Chinese medicine who have also had western (allopathic) medicine teaching from previous visiting volunteers.

[The Surmang Experience]

We received a very warm welcome to Surmang and incredible hospitality from the entire village. Our main supports from Drogha, Phuntsok, Tse-wang (interpreter), Bonzi (housekeeper), and Achi (housekeeper) kept us consistently comfortable and well fed.

Our first challenge was to acclimatize to the elevation. We spent one night in Xining (altitude 2275 m) before our flight to Yushu (elevation 3689 m) and drive to Surmang (elevation 4800 m). We took acetazolamide tablets to assist with acclimatization. We thankfully had no problems with altitude sickness.

Our next challenge was temperature. In April, the forecast ranged from -5° (23° F) to +12° (53° F) Celsius. The living quarters and the clinic likely ranged between -5 to +5 Celsius. It was difficult to stay warm while seeing patients, despite many layers of warm clothing. Regular walks, exercise, and sunbathing helped to provide some warmth. On some evenings, we would have a yak dung fire in our room.

The other major challenge was the lack of running water in the living quarters and the clinic. This has changed since we visited as a new system has been installed. Future volunteers will have the benefit of running water in the kitchen and the clinic. This will help improve hygienic practice in the clinic and will ease the work of the housekeepers who no longer need to fetch water.

[The Clinic Experience]

At the clinic, we worked alongside Drs. Phuntsok and Drogha to see patients from approximately 9:00am-5:30pm seven days per week, with no set hours but working to meet the demand as patients arrived. Many patients came in from the local village but there were also many nomadic families that had come across the Mekong *Dzachu* in Khampa Tibetan, from the Tibet Autonomous Region (TAR) or from the Lhasa-region of Tibet.

While seeing patients, we had the opportunity to teach at the bedside. This often included demonstrating physical examination techniques, expanding differential diagnoses, discussing management strategies including pharmacotherapies, and correct medication dosing for pediatric and adult patients.

Patients often presented in family groupings. The most common presentations were hypertension follow-up, chronic pain, osteoarthritis, suspected gall disorders, epigastric pain, dental pain, pediatric burns, requests for traditional Tibetan urinalysis, and viral upper respiratory tract infections of children.

We participated in two home visits during our time in Surmang. One was to attend a home delivery, and another was for acute abdominal pain in an elderly gentleman.

After the clinic day was over, the local physicians would receive interactive teaching on select topics, typically from 5:30pm-7:00pm daily. The topics requested by the physicians included trauma management, including yak gorings and penetrating trauma, as well as hepatitis and chronic liver disease management.

[Strengths]

We were greatly impressed by the Surmang Foundation and clinic. Specific strengths include:

1. **Physician dedication**. The work ethic and energy of both Drogha and Phuntsok was incredible. Despite their many other responsibilities, they were dedicated to their work 24 hours, 7 days per week. They would eagerly attend home visits at all hours and work to creatively problem solve in order to support their patients. Their thirst for education reflected this dedication and we found them to me open-minded, eager, and enthusiastic learners.

2. **Community engagement**. It was apparent during our visit that the surrounding community holds incredible respect and appreciation for the Surmang Foundation, clinic, staff, and volunteers.

3. **Free medication**. The ability to provide patients with medication as needed without financial barrier helped assist unbiased prescribing practices and patient adherence to management plans. The medication selection was somewhat limited but did provide many of the core medications that were required.

[Education Topics]

The interactive, formal teaching sessions included:

1. *Hepatitis B and C*
   --Epidemiology, Transmission, Pathophysiology, Diagnosis, Monitoring, Treatment and Sequalae

2. *Chronic liver disease* management and prognosis:
   --Ascites, Spontaneous bacterial peritonitis, and Hepatic encephalopathy

3. *Trauma management*:
   --Approach to the trauma patient, Blunt trauma, and Penetrating trauma

4. *Pediatric fever*
   --Approach based on age of infant or child, Differential diagnosis, and Management

5. *ECG basics*:
   --approach to the ECG: rate, rhythm, axis, deviation, intervals, ischemia, other and ECG practice

6. *Acute Coronary Syndromes*

--Definitions, Diagnosis, Role of ECG, Management, and Secondary prevention

7. *Hypertension management*
   --Diagnosis, Treatment targets, Treatment selection and dosing, and Monitoring parameters

8. *Ultrasound identification of long-bone fractures*
   --Indications for ultrasound use and Hands-on practice

9. *The complete neurologic exam*
   --Review and practice

10. *Stroke presentations*
    --Hemorrhagic stroke, Ischemic stroke, Stroke mimickers, Acute management, Prognosis and Secondary prevention

[Barriers Encountered and Recommendations]

1. **Suggestions for clinic equipment**:
    a. Weight scales for adults and infants. The infant scale was broken during our visit and this greatly limited our ability to assess the wellbeing of infants and newborns.
    b. Tympanic membrane thermometer. For more accurate fever assessment, rather than axillary temperatures in pediatric patients.
    c. Broselow tape. This simple tool will assist the physicians to determine the correct medicine dosing for pediatric patients, based on their size.
    d. Bandages and wound care. We treated many serious burns, mostly pediatric. If possible, to have wet wound dressings, this would be more optimal.
    e. Ophthalmoscope replacement, along with fluorescein stain and blue light on the ophthalmoscope. The current ophthalmoscope is not functional for use unfortunately. A simple tool that will assist in eye examination is the use of a blue light option combined with fluorescein stain to check for any corneal abrasions or disruptions.
    f. Gloves and hand sanitizer.

2. **Suggestions for medications**:
    a. Better dosing options. Many antibiotic tablets were very low dose, so to achieve a proper dose, they would need to take 6-8 tablets at a time.
    b. Pediatric specific acetaminophen and ibuprofen. We often found that the dose being provided was far too high for the child's size and age,

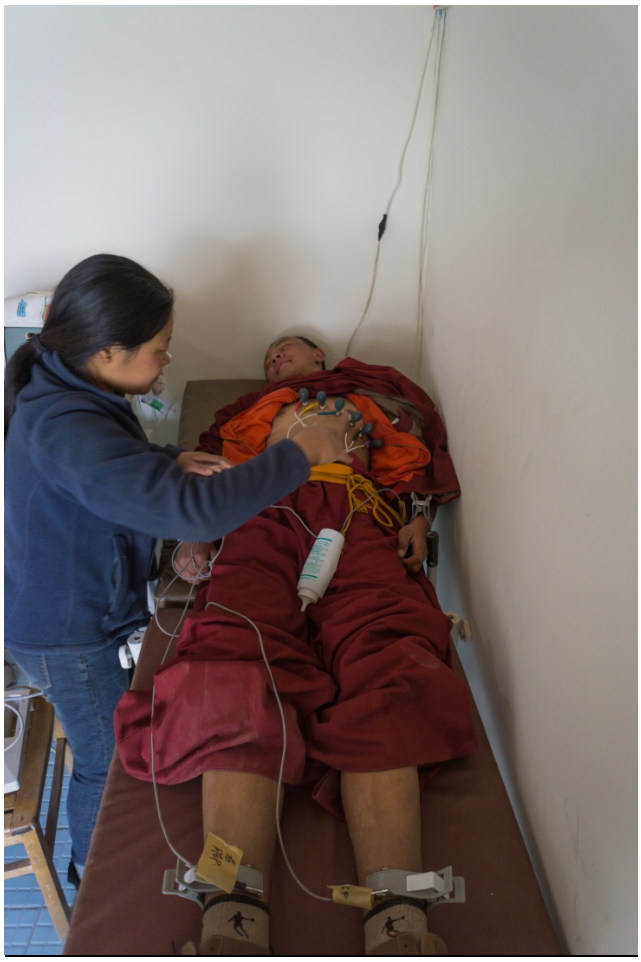
and to find the correct dose, it would require onerous math and then typically cutting tablets into quarters.

3. **Suggestions for administration:**
    a. EMR consideration. We considered how an EMR could be utilized in Surmang during our time there. Dr. Roos trialed the setup of a few online platforms. However, it seems the best solution would be to employ an IT specialist to establish the system and to be available for maintenance when needed. An EMR should have automatic backups, be completely onsite, work in a power outage, be in mandarin, have customizable identification categories such as village and zodiac sign, and finally have a support number that Phuntsok or Drogha could call for issues. Problems with the EMR (such as a crash or broken hardware) would need to be anticipated, as there could be potential serious consequences to losing a chart or not having EMR access temporarily.

    b. Patient identification. As most patients in Tibet do not have a unique identification number, the problem of ID on EMR was considered. One possible option could be the use of a cellphone number as it seemed cellphones were ubiquitous among the patients attending the clinic and are considered to be very affordable in Surmang.

    c. Tele-health for ECG consultation. Despite our three days of lessons teaching ECGs as well as the past teaching of visiting physicians, Phuntsok and Drogha did not appear comfortable with the use of ECGs and also significantly underutilized them, likely because of the lack of comfort. If it were possible for them to have a method to share the ECG remotely with a physician who could interpret it from afar, this would improve their comfort in using it as well as the accuracy of the patient care.

4. **Suggestions for education**:
    a. Tele-education. Given the excellent access to cellphone service and thus internet, we contemplated the option of tele-education. This could be especially useful since the formal teaching only occurred for 1.5-2 hours per day. It would be best done with physicians who have previously visited Surmang so they have an understanding of the practice where Phuntsok and Drogha work including its strengths and barriers.



Dr. Drogha examining a monk

[Suggestions for future visiting physicians]

1. If possible, select summer months to visit the clinic.
2. If visiting in Spring or Fall, pack many warm layers and thick coats. Hot packs (foot and hand warmers) and a hot water bottle were also very helpful.
3. Phuntsok enjoys coffee as a gift. Bring filters from home country.
4. Bring hand sanitizer.
5. Download medical resources ahead of time including drug dosing references, antimicrobial guidelines, UpToDate articles, and PDFs of textbooks for teaching materials.
6. Pack a small towel.
7. If possible, learn basic expressions in Khampa-ke the local Tibetan dialect. this will go a long way in building connections with local patients.

[Summary]

In summary, we felt privileged to work alongside Phuntsok and Drogha. In terms of education, we had much to cover and only wish we had longer to spend there. Their passion for their work created a ripe environment for learning. It was important to work alongside them to understand the context of the work including the culture, the limitations of diagnostics and treatment options, and the effects of the remote location. We had a very positive experience and hope to work with the Surmang Foundation again in the future.