

The anatomy of a medical mission

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Atisha Pandya (22 years) and Aayushi Pandya (18 years) are sisters who have an interest in medicine and Operation Smile. Atisha is currently in her fourth year of medical school at King's College London (GKT). Aayushi is currently sitting her A-Level exams and has been accepted into medicine with the course commencing September 2012. Along with medicine, both enjoy reading, yoga, music and participation in various clubs.

Cleft lips and palates, caused by abnormal facial development during gestation, are birth deformities that go unaddressed in many countries due to the lack of available surgical services. This adds to the overall Global Burden of Surgical Disease (GBD) and was highlighted in the WHO study looking at strategies to reduce the burden of craniofacial anomalies¹. Both are variations of clefting congenital deformities where the body's natural structures have a non-fusion prior to birth. Approximately one in 700 children born has this birth deformity, but for these individuals and for those with afflicted burns, there are numerous challenges ahead. Burns victims and those with cleft lips and palate face social isolation and stigma from their peers, which can have truly devastating psychological and emotional implications. Burns patients also face chronic scarring and various functional difficulties, in movement and in commonplace activities. Those with cleft lips and/or palates face difficulties involving eating, speech, dentition, normal facial growth and recurrent ear infections. Surgery is usually done between the ages of 6 weeks and 9 months for a child with a cleft lip, to avoid future complications; and prior to one year of age for cleft palate, to enable normal speech development. Sadly, some countries are unable to facilitate the needs of those affected by clefts or burns, and this is the very reason why an organisation such as Operation Smile can be so helpful.

Growing up with parents in the medical profession, both of us had always been exposed to medicine and the way in which people can help as volunteers. Our father had recently got involved in Operation Smile missions and one day mentioned to us that they were looking for volunteers. Following this, we looked up the sort of work Operation Smile do and realised that despite only being a medical student and a high school student, our help could be useful. We signed up to the mission to Jordan but no amount of previous reading or research prepared us for the exact way a mission runs. We were fascinated by the number of everyday individuals like ourselves that were volunteering on the mission. Some would help with photography; others with screening and administration; some students were there to help take care of the children when parents were anxious about their other child's surgery. We quickly became part of a team and after a few days it felt like we were all family, working towards one goal, to help those in need of medical care.

Acting as Student Volunteers on a mission to Amman, Jordan was a unique and rewarding experience. It opened our eyes to what medical skills can

achieve in countries which do not have the infrastructure or technology fully facilitative of its patients' needs. Operation Smile is an international charity which strives to provide free medical healthcare in numerous countries, and repair cleft lips and palates, as well as burns. It was first founded in 1982 and currently supports international and local in-country medical projects to 25 countries, performing up to 175 missions every year. In March 1992, Operation Smile UK gained registered charitable status and has continued to provide free surgery to thousands of children around the world, changing lives one smile at a time.

While out on a mission, the team comprises of various professionals and students, each with unique skills to offer the team. Within the medical professionals, there are intensive care surgeons, nurses, child life specialists, orthodontists, dentists and paediatricians, with the addition of both medical and non-medical students. There are also local interpreters and photographers who play a crucial role during the mission in order to evaluate the success of each surgery. Some volunteers deal with the medical records, as administration during such a large and fast-paced mission is key.

On the first day of the mission the entire team met for the first time. Introductions were made along with an attempt to get to know one another and create rapport. It is important when working within any team to maintain a good relationship with your colleagues and foster an environment of trust and respect.

The first day of an Operation Smile mission involves a rigorous screening process. The team sees hundreds of patients, assessing them and identifying if they are eligible candidates to be operated on. During this screening process, we saw how important decisions are made within a team, the process behind the decisions and the way in which they impact different individuals.

In our medical mission in Amman, there were 140 patients screened, of which 87 were surgically treated. Of the 87 patients, 51 were male and 36 were female. The age of the patients varied from 3 months to over 26 years. The majority of patients were under 18, with the 5-12 age bracket having the largest number.

The selection criteria for suitability for the operation were based on the type of deformity and the age of the patients (Table 1).

Priority 1	Primary repair of a cleft lip. Age 6 months to 1 year, or wound dehiscence affecting any age group
Priority 2	Primary repair of cleft palate age 1-6 years
Priority 3	Primary repair of cleft palate, age 6- adult
Priority 4	Secondary repair of lips and palates affecting any age group
Priority 5	Other injuries or conditions such as burns

Table 1. Surgical priorities.

Using these criteria, decisions were made on which patients should be operated on. The decision also took into consideration the ease of operation, the probability of success and the level of post-operative and outpatient care needed on follow up. Due to the nature of the mission and the time constraint, certain patients with more complicated conditions were not eligible for surgery as there were too many complications that would have needed to be dealt with later on.

Once the screening process was completed, the patients were briefed on what their surgery would entail and given information on what would happen on the day of the surgery, including pre- and post-operative care. Their medical records were collected and looked at along with any orthodontic records and dentist records that were available.

For the next 5 days of the mission the surgeries took place. In total there were 96 procedures that took place on five operating tables (Table 2).

Each patient who had a procedure done had a team looking after them. This team included the surgeon, anaesthetist, medical volunteers, student volunteers, pediatrician and local volunteers.

Each morning a team meeting would take place, where the aims of the day and the various procedures that would take place during the day were discussed. Then the team would prepare the rooms and theatres for the day's work. The patients from the previous day would be discharged and new patients would be marked up ready for surgery. The surgeries would then take place, with usually two surgeries going on simultaneously in one room on two operating tables. Once the surgeries for the day were completed the patients would be sent to recovery and then transferred to the appropriate ward.

Procedures	Numbers
Lips	36
Palates	22
Contracture release	13
Correction of polysyndactyly	5
Moles/tumours/haemangioma	4
Scar excision	3
Other	10
Total	96

Table 2. Summary of procedures.

As with any operation there are always risks of complications, and on the mission there were two major complications. These were a post-operative bleeding and oozing of a cleft lip repair, and a post-operative fistula of a palate repair. Both patients were immediately operated on and the complications were managed. At the end of the operative period, all patients were evaluated and the skeleton team remained to continue giving care to those who needed it.

One aspect of the team which truly intrigued us was the skeletal body of volunteers who remained after the surgeries at the end of each day to be with the patients. They would monitor the patients' progress and be always available in case of any complications. We loved how close the team were and how everyone arrived at the hospital at the same time, with no one leaving until the last patient was safe in recovery.

Prior to the mission, we were unsure as to what our roles would be in the team. As students, we were eager to be just as helpful as the volunteers

already in the medical profession. We realised however, soon after the first day of the mission, that there was always some way to aid the team and keep busy. At times, we assumed an administrative role, an area crucial in the smooth running of a medical mission. We also spent time in outpatients, with patients who had just undergone surgery, and were by their side to ensure that they always had someone with them to aid them wherever possible. We learnt so much during the mission, both in medical terms and in understanding the emotions and fears of the patients and their family members.

It was an amazing experience, and a fantastic cultural one at that, where even the differences in language were no barrier to providing this medical treatment. It was truly enriching as you bonded with each team member and made many friends from numerous countries. These friendships stay with you through life as the whole team were part of something so magical, transforming a large number of lives in so short a time. We felt needed on the mission, whether we were involved in transporting equipment or whether we were just listening to a mother's concerns, reassuring her child with the child therapist prior to surgery.

If you are interested in being part of something so instrumental in altering a person's life forever, we would not hesitate to make it happen. By visiting the Operation Smile UK website (www.operationsmile.org), and applying as a student volunteer, you can make a real impact and have a profound effect on someone's life. It is simply amazing that even as students, we can do so much whilst having so much to gain.

REFERENCES

1. World Health Organization. Global strategies to reduce the health-care burden of craniofacial anomalies: report of WHO meetings on International Collaborative Research on Craniofacial Anomalies. Geneva: World Health Organization; 2002.