# Cleft and Craniofacial Mission Care

## Management of Facial Clefts: International Missions

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**KEYWORDS**

• Cleft and craniofacial missions • Mission centers • Mission grants • Cleft and craniofacial teams • International missions

**KEY POINTS**

- The best mission goal for teams working for facial cleft deformities is one of eventual establishment of a longitudinal treatment center.
- Considerations of site safety, regulations and permissions for operating foreign professionals, creating contacts with community organizations for support, patient screening, and quality and quantity of clean working facilities lay the groundwork for preparation before a site visit.
- Appropriate equipment is vital to the trip's success, such as power source, backup generators, instrument sterilization, need for portable water purifiers, and transportation arrangements for remote patients.
- Keeping the longitudinal treatment mission in mind, an organized method of establishing staged surgical care and follow-up visits for several years is crucial; the regularity of these schedules allows for adequate wound maturation between visits as well as facilitating the consistency of staged surgical care ongoing in a sequential fashion.

*The perfume of sandalwood,*
*Rosebay or jasmine*
*Cannot travel against the wind.*
*But the fragrance of virtue*
*Travels even against the wind,*
*As far as the ends of the world.*
*—Dhammapada*

## AMBASSADORIAL SERVICE

With all international missions, one must ask what exactly the "mission" is. What is hoped to be accomplished? Is it a personal goal of the visitor, or is it a personal goal for the host? I have found that the best mission goal for teams working for facial cleft deformities is one of eventual establishment of a longitudinal treatment center (Fig. 1), which includes all possible phases of care through a standard team approach for management. How this is accomplished is not important. I use the word mission in the same way as a military operative word is used, that is, a "project" so as not to confuse any religion's affiliation or context. Whatever one's personal convictions are will be passively demonstrated regardless of the pragmatic and sectarian nature of the goal of patient care.

## PREPLANNING AND CONTACTS

When I am approached to help a foreign community with a mission startup, I always ask what *exactly* they perceive their needs are. Whether it is education, equipment, scholarships, our

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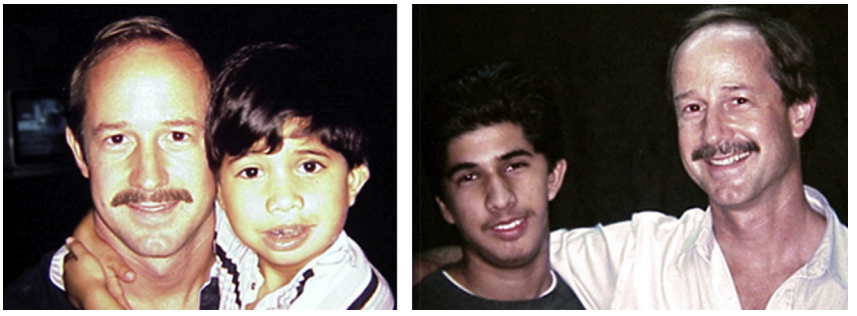

**Fig. 1.** This mission clinic child was operated for hemi-facial microsomia at age 4 and is shown at age 22 with Dr Moses at both ends of his treatment. Longitudinal care allows careful staged surgery and excellent follow-up.

operating either for them or side by side, and whatever that turns out to be, that is exactly what I arrange to provide and deliver to them. This process may have to be repeated several times, even at the same site, eventually filling up their "reservoir of needs" before the site is so completely "full" that they are brimming over, and it is then that they ask what else *they* can do to improve. They are then in a position that is ready to fulfill the original task and goal of the "mission." That is, to provide the children afflicted with facial cleft deformities sequential, longitudinal excellence of care and management appropriate to each deformity, which is performed at the proper time of growth and development. All this is done in order to achieve optimal results for the successful entry of that patient with optimal facial form and function into Society's membership.

This viewpoint is truly capitalistic because I feel when one is figuratively "full" and able to take care of all personal, professional, and familial needs, they then become more inclined to spiritually tithe or share a portion of their abundance in order to gain the joy that comes with giving and caring for those less fortunate.

This viewpoint has worked time and time again, and through the marriage of these clinics to international academic institutions as well as international service organizations, this process can be easily accomplished yielding a sustainable mission site, which has the very fabric of its community woven throughout thus ensuring its success.

The purpose of this article is to provide the reader with a concise outline of philosophic and practical knowledge for which to accomplish this goal of a sustainable and longitudinally oriented facial-cleft mission treatment center. The importance of longitudinal care cannot be overemphasized and is the foundation of an ethical and successful center for care. As a Foundation, we have had many opportunities to treat patients sequentially from stage to stage, participating in their marriages, sponsoring educations, and generally participating in expanded roles rarely available to our cross-sectional practices stateside. One such patient was portrayed by the famous Latino muralist, Mario Torrero, known for murals featured at the Vatican, who painted a work entitled, "Miraculous Metamorphosis" (**Fig. 2**), which was presented to the First Lady of Costa Rica, Gloria Bejarano (**Fig. 3**) and hangs in the Children's Museum in San Jose, Costa Rica, illustrating the stages of correction of the first patient of our mission work many years ago, which established the Costa Rica project, Smiles of Costa Rica (**Figs. 4** and **5**).

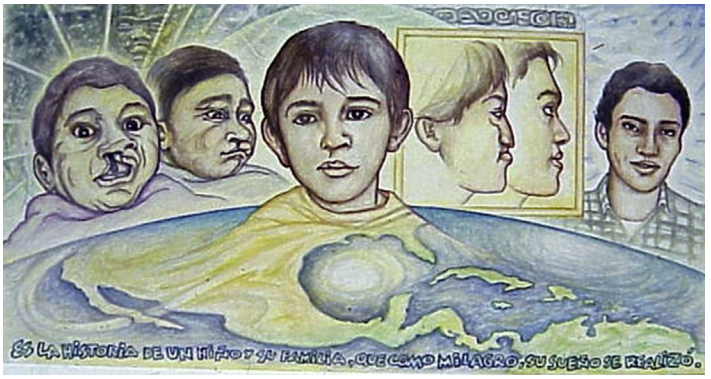

**Fig. 2.** The artistry entitled "Miraculous Metamorphosis," produced by famous Latino activist-artist, Mario Torrero, illustrating some of the stages of surgical care for the completion of a patient from Costa Rica. This art piece was presented to Costa Rica's First Lady, Gloria Bejarano, and currently resides at the Children's Museum located in San Jose, Costa Rica as a reminder of the successful establishing of the first Craniofacial Center in Central America at the Hospital de Ninos.

**Fig. 3.** The First Lady of Costa Rica, Gloria Bejarano de Calderon, second from left, Dr Moses, first left, and Rotarians Rodrigo and Lucia Sauma of the Club Rotario Rohrmoser, Costa Rica.

## ADVANCE PLANNING AND CONTACT

I must acknowledge that I have learned that a team site is more easily developed and accomplished by strolling through, or even sometimes being pulled through, an open door, rather than by deciding on a locale and then pushing on that door in order to achieve it. All one has to do is to open space in their own calendar, open their heart and mind to a mission service, and the universe will conspire to fill that opening; you can trust me!

Once that opportunity presents itself to you, it is important to set your foundation in place to grow and form your mission site in a legitimate fashion. No matter the form of the invitation or opportunity request, I recommend always following the steps outlined in this article completely in order to be more certain of your long-term success. It is only fair for those children and families involved who have had their treatments initiated, so that they will not be "left hanging" with only partial treatments should the team fall apart later. The steps are as follows:

- Site appropriateness regarding team safety and security
- Licensure and governmental regulations
- Local clinician care and current facilities
- Community service organizations

From the comfort of your desk, you will want to research the governmental travel watch, such as

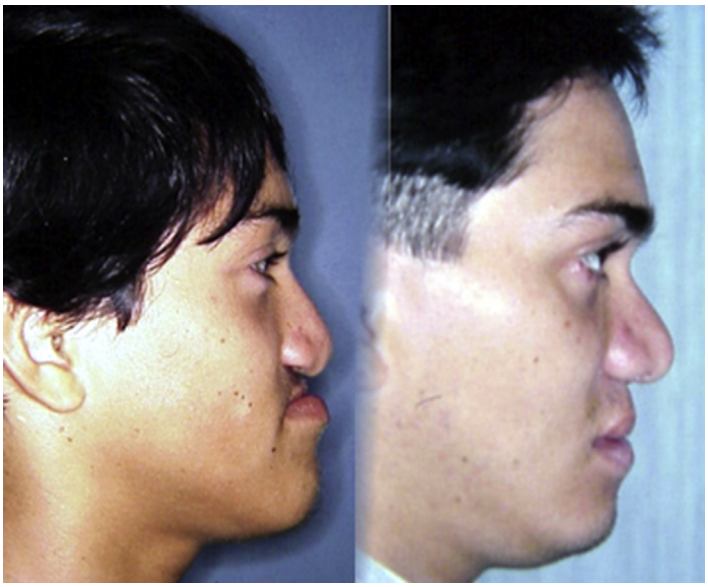

**Fig. 4.** Profile images of finished staged surgical case that was the case study for the artwork, "Miraculous Metapmorphosis," by Mario Torrero. His case was referred for treatment in the United States with Dr Moses, but instead was used as a catalyst to open the Craniofacial Unit at the Hospital de Ninos, Costa Rica, CR.

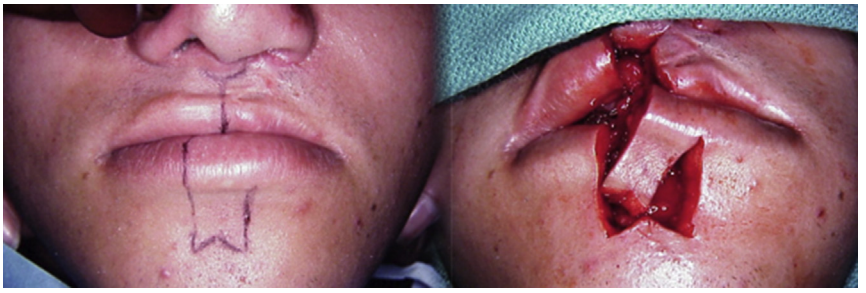

**Fig. 5.** These combined photographs illustrate just one of the many stages for the full facial reconstruction of cleft and craniofacial deformities. Abbe flap design and incision carried out on the patient portrayed in "Miraculous Metamorphosis" artwork shown in Fig. 2.

http://travel.state.gov/content/passports/english/alertswarnings.html, in order to ensure the site's appropriateness regarding your team's safety and security.

Contacts made to the proposed country's official state consulate or embassy can lead you to their regulations regarding foreign-trained professionals working and operating their profession within their country. They may refer you to that location's regional director of public assistance for the poor, who may have a more direct influence and can facilitate your permission to work with them (for example, in Mexico, this is the "DIF" or DESARROLO INTEGRAL DE LA FAMILIA; http://sn.dif.gob.mx/).

In addition, through contact to the president of the local active community organization, such as the Rotary Club, Lions, Kiwanis, and so on, you can find out about and contact local club members or their friends who happen to be physicians and dentists within that community. They may be willing to actually operate together with your team or provide preoperative and postoperative support for the patients. They can provide a valuable insight into the quality and availability of working facilities and hospital, knowledge of clean water and sanitation conditions, and equipment needs. Through their providing photographs of potentially available operating rooms and facilities, your nursing and anesthesia team members can get a general idea of facility equipment and conditions ahead of time in order to help them prepare for the eventual initial screening clinic and first site-visit.

Importantly, the community service organization can also act as a safety-catch to screen all potential patients and families so as to prevent damaging financial interferences with the area's private practice sector by accidently operating on a relatively wealthy customer who moves to the head of your screening line by societal dominance and who ordinarily would have been treated by their local private practitioners. This does not mean that you do not accept financially stable patients who cannot obtain their care elsewhere due to regional lack of that medical or dental specialty, nor those who are brought by their clinicians to work side by side for ambassadorial professional knowledge exchanges (*still, all treatments are performed free-of-charge by all parties in these cases*). Your team does not want to be known for operating on a case that had been scheduled only the following week by a local surgeon without his knowledge or approval, thereby risking being ostracized both professionally and governmentally.

Those community organizations, such as Rotary, many times provide necessary "boots-on-the-ground" assistance with transportation, customs negotiations at port of entry, lodging, and meals and can provide matching monetary grants for equipment needs of the project (if approached correctly), sometimes even hosting local fundraisers in order to supply their portion of the funds (**Fig. 6**). They literally are the "fabric of the community," participating as the business leaders of the community who apply much more weight of importance for continuity of support than many of the other usual vehicles used for surgical missions that I have seen in the past, which were supported through churches, military, school officials, and so on. This finding seems to be because this particular type of "fabric" outlasts regime changes within the government, churches, and local power infighting and has no religious bias. Following a phrase of action, *Service Above Self* seems to do the trick for everyone involved.

## TEAM SITE VISIT AND TEST CASES

After a firmly established contact and location for the potential mission clinic is researched and verified to be permitted and welcomed, plans should be made for a physical site inspection visit, which may or may not involve being prepared for a

**Fig. 6.** Traditional Mexican folkloric dancers performing at one of the first fund-raiser dinner picnics hosted by Rotary for the development of funds for the Rotary Matching Grant, which purchased original equipment for the Thousand Smiles Cleft Center project in Ensenada, Baja California, Mexico.

performance of a test surgery or 2. In addition, a patient record-charting system is established, which can later be digitalized by your core team for off-site access, leaving the original paper records with the host facility. During screening, photographic records are taken after the parents or legal guardians have signed a treatment permission and photographic documentation and publication/social media usage release form, which is maintained and re-signed at each clinic (Appendix 1). On a separate clerical and legal note, it should also be a standard for your mission volunteers to sign a personal waiver of liability for any organizations connected with the program as well as ensuring any volunteers are either of legal age or have a legally appointed guardian present with them (Appendix 2).

The purpose of considering the possibility of a test case is to both motivate your site visit "core" professional team and flush out any potential needs of your support community, as well as the physical treatment facility itself so that future preparations will be made to be prepared for a full-team mission project.

With regard to your site visit's "core" team, it should minimally include the surgeon, anesthesiologist, operating room nurse, and recovery nurse. The recovery nurse can act as a circulating nurse during the first test case with the anesthesiologist managing the immediate postoperative recovery within the operating room together as a postanesthesia care unit until stabilized, depending on the level of care available at your chosen mission site. One of the nurses should be versed in postoperative cleft care nutrition and hygiene as well.

On the second visit, "core" members that can be added are the speech and language pathologists (**Fig. 7**) assisted by persons trained in nasopharyngoscopy (**Fig. 8**). General and orthodontic dentists (**Fig. 9**), audiologists (**Fig. 10**), and ear, nose, and throat specialists (**Fig. 11**), as well as clinical

**Fig. 7.** One of our speech and language pathologists demonstrating where the nasal resonance sounds are felt to a young cleft patient and parent at the Smiles of Los Cabos mission project.

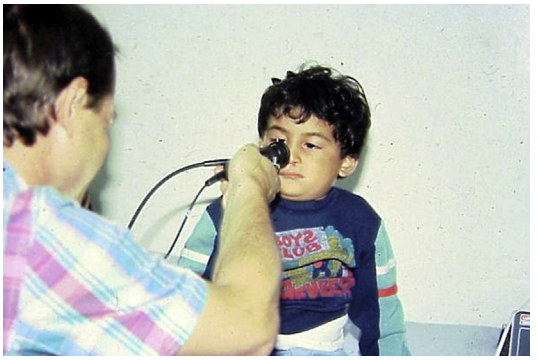

**Fig. 8.** Dr Moses preparing trust and conditioning with a patient before naso-pharyngoscopic examination.

psychologists or trained personnel experienced with the handling of self-esteem development, are added to the team for the establishment of longitudinal care and successful management (Fig. 12). On the occasion of establishing a craniofacial site, local neurosurgeons (Fig. 13), ophthalmologists, and genetic counselors have been used for complete team care.

Establishing a full-team approach to the management of the region's cleft and craniofacial population is the eventual goal of these project missions, and keeping that vision in the minds of both the volunteers and host clinicians is tantamount for success.

We have been blessed in setting up quarterly mission sites that have access for myringotomy tubes, ventilation, speech and language assessments and treatments, dental restorative care, orthodontic care followed by orthognathic surgery, and even dental implant restorative care into the grafted bone sites. All can be accomplished with proper growth of the team concept and added instrumentation within even a foreign mission setting in time in some locations, even supplying mobile dental units through their community support organizations (Fig. 14).

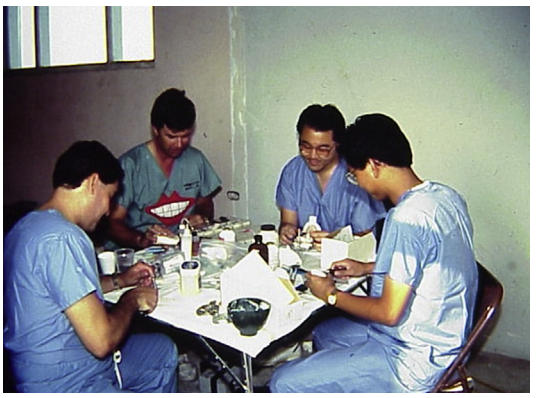

**Fig. 9.** One of our dental teams working on cleft management prosthetics and orthodontic palatal appliance construction at a cleft project in Mexico.

It is always helpful to have an invitation extended to your mission site's local professionals to aid you with postoperative care, urging them to assist or somehow participate with this "first case" in order to assure firsthand knowledge of the case as well as to build team spirit and trust. Following a case completely throughout its treatment will let your team know what resources are already available and what needs should be enhanced for future expended clinics, whether via customs importation or via local purchases before the next planned clinic visit.

During the course of the site visit and before the test case, each member of the core team should make enquiry and inspect the various areas within their responsibilities (for example, auxiliary battery power and surge protectors, anesthesia machines, monitors, ventilation systems, intravenous fluid and administration set availability, as well as medications). Care must be given to ensure that the power plant for the facility has a backup electric generator, spare FULL oxygen tanks, and continuous water supply. If a functioning power backup generator is unavailable, there should be a plan to divert away from the common practice of use of the "all-in-one" monitor package popularly now used in anesthesia monitoring and revert to the independent critical patient-care monitors for noninvasive blood pressure system, $O_2$, $CO_2$, electrocardiogram, and so on, and any equipment necessary to safely complete the surgical case with each having their own independent battery backup pack installed and charged for when the "power-fail" occurrences come during critical moments. "Power-fail" occurrence has happened all too often on our trips, and preparation has saved the day more than once (Fig. 15).

Separate and secure storage rooms or a facility to store the mission team's special equipment and supplies between clinics are important to have built or provided. The specialty sterile supplies, extra sterilizer, anesthesia monitors, and other necessary equipment that were paid and provided by special grants specifically for the mission clinic will need to be stored and conserved in a dry, climate-controlled room with surge-protected electric power strips available (Figs. 16 and 17). You must know how much of this material remains on hand for the next clinic, and that it is functioning and available on return. You should be knowledgeable about standard restocking of the sterile supplies and disposables used and the amount that will be repurchased and shipped for the following trip. Of course, there are exceptions to this rule

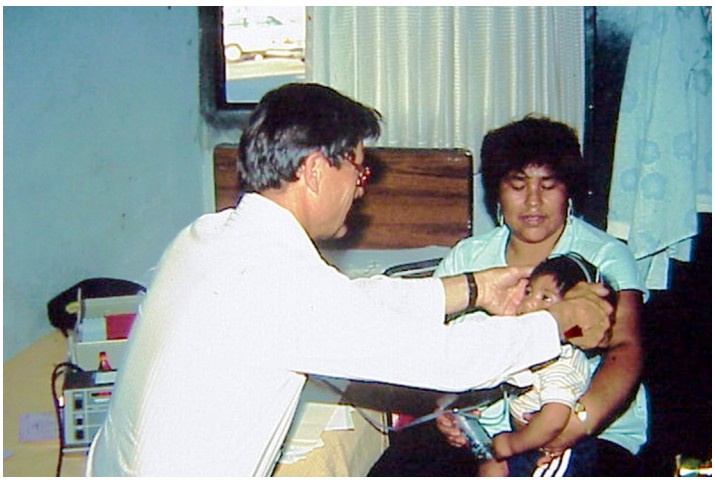

**Fig. 10.** One of our audiologists placing headphones on a child at one of our early cleft screening clinics in Ensenada, Baja California, Mexico.

for those equipment needs of the facility that your project has donated for their everyday use in improvement for the community, but, in general, because of equipment loss, breakage, nonmaintenance, and so on, it is wise to protect your mission clinic assets to ensure they are ready for you on arrival.

Battery backup units must be present within the monitors, and they need to be constantly attached to the surge-protected electric power strips during your absence so that they can cycle themselves and remain healthy. This facility should be built either within the hospital/clinic facility (if there is reasonable assurance of the clinic's continuing hospitality) or in a separate location of the supporting community service club's desire, assuming easy transportation of the storage material via their transportation assistance to whatever clinic facility will be designated for surgical care.

**Fig. 11.** Otolaryngologist, Dr Marc Lebovits, examines patient's auditory meatus to ensure previously placed myringotomy ventilation tubes are still functional.

## EXTRA CONSIDERATIONS

### *Operating Room Instrumentation Turnover Facilitation*

Another consideration vital for rapid turnover and accomplishing the best use of donated service


**Fig. 12.** Smiles International Foundation's Self-esteem and Patient Coordinator, Maribel V. Moses, reads to a troubled child from a relevant children's esteem development book, *Detri's Round Trip*.

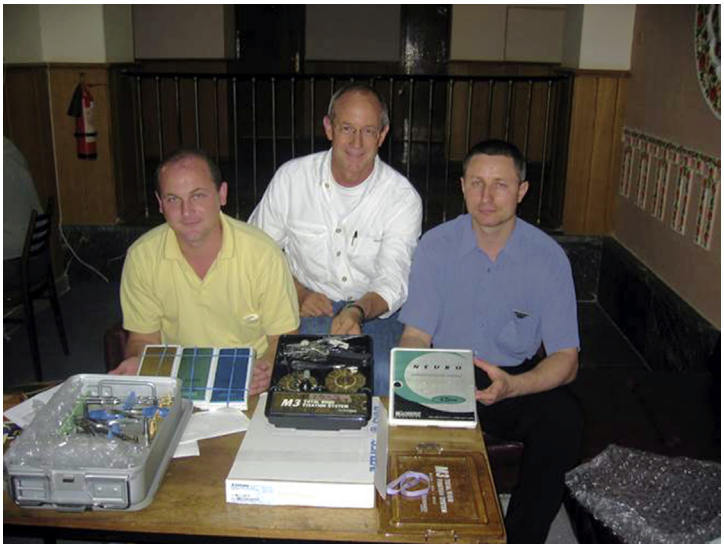

**Fig. 13.** Dr Moses (*center*) presents the grant donation for the specialized Neurosurgical Plating System to Smiles of Ukraine's Neurosurgeon, Dr Yuriy (*far right*), and Maxillofacial Surgeon, Dr Komok (*far left*), at the Smiles of Ukraine Craniofacial mission project.

time for mission care is how the instrumentation sterilization will be handled. Our experience has led us in many developing countries to quickly put a modern autoclave unit (EZ-10 E-Series automatic autoclave, Tuttnauer, U.S.A. Co) into the offered donation grant list early in the site development period. The result is a substantial increase in cases operated by twice the amount before the addition because the specialized and expensive instrumentation sets transported and carried by each team are in a limited supply, and through the judicious staggering of case scheduling for instrument set needs without duplication, a greater number of cases may be handled. The need for palatal retractors like the Dingman is ever present, and cases of pharyngeal flap, palatoplasty, fistula closures, and alveolar bone grafting all need to be interposed with cheiloplasty, rhinoplasty, external facial procedures, otoplasty, and so on, which do not require the Dingman and thus gives time for sterilization turnover. Having a reliable and modern automatic sterilizer in place will be a mission team enhancer and is easy to raise money for by the supporting organizations when the purpose is explained in such a manner (Fig. 18).


**Fig. 14.** One of the surgical teams working at Thousand Smiles mission project early in project development standing next to a fully equipped dental treatment trailer donated by the Rotary Club for the project's use in the parking lot next to the surgical hospital. From left to right in the back row, Dr Jeff Moses, Dr Don Spengler, Dr Farrel Levasseur, Dr Tetsuji Tamashiro, Dr Kevin Smith, are identified and shown with numerous unidentified Rotaract and student volunteers.

### *Water Health*

In some countries or locations, a serious condition of contaminated water exists with not only the endemic risks for population dysentery and

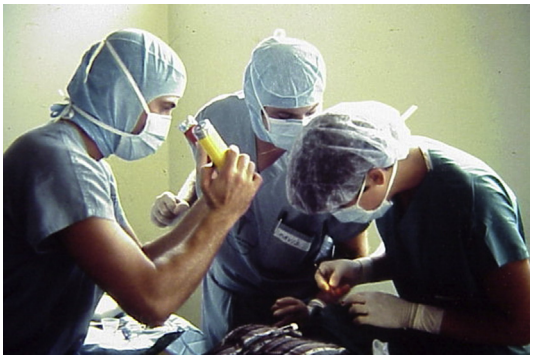

**Fig. 15.** Electricity and power fluctuation failures in the mission project field are frequent and point out the need for backup battery power systems on the anesthesia monitors as well as the need to have auxiliary battery flashlights available in the operating room.


**Fig. 16.** A lockable storage room is crucial to having the specialized sterile supplies kept organized and inventoried as well as to keeping operating room equipment charged and ready for your ongoing scheduled mission project visits. This room was constructed by the Rotary Club of Tecate at their remote primary treatment clinic where we convert the unit triennially into a fully functioning operating and recovery treatment unit.

water-borne disease but also hospital water contamination with the postoperative risk of infections and possibility of resulting case failures. Usually the site visit can catch the risk factor, and plans for corrections via portable water purification systems (Custom Modular System: Water Mission International, North Charleston, SC) can be made before a full onset of mission clinic activities. However, there was one situation encountered where our site was very remote in the deltas of the Godavari River in Andhra Pradesh, Southeastern India, in which the village's well, orphanage, school residency, and hospital all drew water from a contaminated canal source, which served multiple purposes.

Swimming water buffalo, human waste runoff, clothing washing, dish washing, as well as human bathing were all done simultaneously with drinking and brushing of teeth from the same source! (**Fig. 19**). Needless to say, our water sampling tested positive for dangerous levels of various pathogens, including *Escherichia coli*, and we were forced to obtain water engineering in order to construct, ship, and install a water purification system (Custom Modular System: Water Mission International, North Charleston, SC) (**Fig. 20**). We designed this to be sufficient for at least 6000 people and durable enough to last more than a 10-year lifespan requiring no expensive removable cartridges but rather scheduled backwashing, only the addition of an occasional swimming pool chlorine tablet and monthly water sample testing. Maintenance was taught to the hospital manager along with water sanitation courses at the school for the students and teachers alike (**Fig. 21**). This clean water unit supplied not only the hospital but also the orphanage school and dormitory serving more than 450 children and the local village as well of more than 4000 persons (see **Fig. 20**). It was a little tough to raise this up to the fourth floor of the tower near the tanks due to the absence of heavy equipment in this remote region, but it was made possible by old-fashioned hoist-and-tree-pole slide techniques (**Fig. 22**).

## PATIENT AND CLINIC LOGISTICS

The possibility exists in some site visits to discover that the clinic provided is at a location that has the local support organizations, community support doctors, as well as accommodation and travel access, but does not have as many

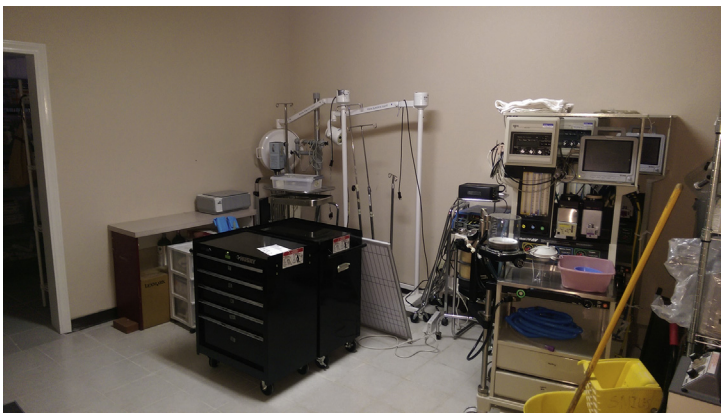

**Fig. 17.** Equipment stored in a dry, climate-controlled room with surge-protected electric power strips available.

**Fig. 18.** One indispensable piece of equipment is the Automatic Autoclave Sterilizer purchased for your mission clinic in a size large enough to handle craniomaxillofacial instrument sets and which can be set and operated by relatively inexperienced volunteer help so as to run constantly and assist in rapid instrument turnover, greatly enhancing the potential number of surgical cases handled each clinic. Care is to be given to use distilled water only and to review manufacturer's recommended usage with the team ahead of the busy operating day.

patients living nearby as those living rurally or many kilometers away. In these cases, making use of the community support resources, such as orphanages, Rotary or Lions or Kiwanis clubs, and possibly the governmental public family assistance organizations, which exist for that country (in Mexico, this is the DIF, which is present for every community; **Fig. 23**) and having access to vans or school buses, arrangements may be made for successful transportation for those families and patients to the regularly scheduled clinics and follow-up appointments for these groups on a scheduled basis.

On this note, it is imperative to point out that your team mission clinics must be scheduled in a fashion that everyone involved knows exactly your return clinic dates for the next several years.

This schedule will help your team volunteers, your host support team and hospital members, patients and their families, and the community-at-large who are representing your future patient referrals to mark their calendars and reduce the potential for missed important follow-up surgeries and treatment care, giving you a longitudinal treatment line for your cases. In fact, many patients and their parents see these screening and treatment clinics as a chance to share experiences and to reconnect with others who share the challenges of living with facial differences. Some children have been on the same schedule for surgery as infants and matured over the years with their staged procedures at the same clinic look forward to seeing their surrogate "family" at the activities surrounding these clinics (**Fig. 24**).

I suggest never canceling a clinic, but if necessary, at least send an emissary to register the new patients, take follow-up photos of the old patients, and hold the door open until any issues are resolved. Too many mission sites have failed because of a loss of confidence of regularity and reliability.

I find that the most logical and consistent way to do this is by selecting your screening day and to call that day the repeating date. These clinics are usually held 2 to 4 times per year at the minimum so that consistent surgical timing can be given for wound healing between surgeries. For everyone's memory, it becomes useful to designate something like the "FIRST FRIDAY of each of the months of February, May, August, and November" for our quarterly weekend clinics such as the one I helped set up in Ensenada, Mexico held every 3 months. Or, as in the case of the clinic I helped set up in Cabo San Lucas, Mexico, working semiannually, which is known by all to begin on the FOURTH MONDAY of the months of April and October, giving 6 months between visits for this week-long surgical mission. The regularity of these schedules allows for adequate wound maturation between visits as well as for facilitating the consistency of staged surgical care ongoing in a sequential fashion.

**Fig. 19.** This composite photo shows water buffalo swimming, women washing clothes and dishes, as well as men bathing and brushing their teeth in the same canals used for ingestion purposes at the orphanage kitchen, hospital, and school. All of this common usage adds up to filthy water sanitation and the presence of *E coli* in the drinking and cooking water both in the villages and at the hospital and kitchen at the orphanage clinic for Smiles of India.


**Fig. 20.** A portable water purification unit is displayed here showing a compartmentalized unit, which is easy to install, requires only backwashing and no cartridges, exceeds US Environmental Clean Water Standards, and produces enough clean water for 6000 persons for over a 10-year lifespan (W.M.I. Portable Water Purification Unit).

Obviously, depending on whether each member of your team attends every clinic or only 1 or 2 throughout the year, this schedule can keep everyone's enthusiasm fresh and avoid "volunteer burnout." The avoidance of this is important to allow the eventual expansion of your program as it grows in size, being able to still give the necessary consistent care to your patients and families who, along with their friends, will spread the word that *you will always be there on those dates without fail thus far*.

Usually, if at all possible, it is helpful to schedule several days of surgery to allow for scheduling difficulties as well as missed preoperative instructions allowing for alternate case fill-ins without condemning the conflicted case to a nonoperative status. These patients place a lot of hope on the surgery and travel a long distance at no small effort many times, and extra effort should be taken by the support volunteers in the town to put them up at a local orphanage or make arrangements for controlling their preoperative and postoperative environment as much as possible. However, on those "weekend" mission clinics spanning Friday to Sunday, I have found it advantageous to arrive Thursday evening and screen the first half of the day on the Friday, all the while looking for a couple of shorter revision cases that have yet to eat and are NPO (nothing by mouth). Then, isolate those select patients and bring them over for afternoon surgery. While the hospital team is cleaning the operating rooms and the recovery room and setting up the equipment, we continue the screening, preoperative evaluations, and follow-ups until they are finished, and the afternoon surgical cases are ready for induction.


**Fig. 21.** The local school and clinic manager receiving instruction on weekly water testing and administration of backwashing procedures as well as the addition of chorine pool tablet as necessary from results of chlorine testing.

Then, with a couple of minimally complex afternoon cases done, the wrinkles of any operating room delay-potentials are minimized, and all systems are made with a safe "go-ahead," ensuring a smooth and early start the next morning for the long and fruitful mission surgical treatment day. On the main operating room day, all operating rooms are therefore already set up, tested, and running well. The nurses and anesthesiologists can all get a good night's sleep, knowing the situation is well in hand for the next day, with having the final surgical scheduled cases arranged for morning admission planned with the necessary instrumentation presterilized and the cases reviewed that evening at the team's presurgical rounds and academic presentation.

Usually, in order to keep the professional team from burning out and happily returning each clinic, 5 to 6 cases are scheduled for each operating room available daily depending on complexity. I find that running 2 rooms as a minimum enhances the flow of the day due to staggered starting times and equipment overlap.

The team case review for the following day's surgeries can be done either before or after the team's continuing medical education (CME) lectures, which are brought to each mission in order to both enhance the team's appreciation of the management of the patient's facial cleft-care and to provide a platform for the International Ambassadorial cross-cultural exchanges of technique advancements as the mission site project grows.

**Fig. 22.** Because there are no industrial cranes present in this remote village in India, old-fashioned ingenuity through the use of cut tree-poles was used to lift the 1-ton water purifier up many stories to the water storage tanks previously placed there for gravity distribution. Because of the size of the pump, the unit needed to be placed on the same story in this isolated instance. Inch by inch, with the assistance of many school workers and much prayer, the unit was slid up the poles by the use of the auto-engine hoist ratchet. Finally, the unit is received with success.

## ACADEMIC AND AMBASSADORIAL EXCHANGE

It is helpful to have a US accreditation-certified continuing education provider available for your program because this gives all professionals valuable certificate verification of the course objectives and subject studies, which can enhance their curriculum vitae as well as serve for biennial license renewal requirements. Professional volunteers have limited free time in order to advance their CME requirements, vacation with their loved ones, and serve for charitable missions. The more you can accommodate these issues together, the more you will be assured reliable return of your carefully selected and experienced mission team providers. Not only do we provide CME and professional lectures (Fig. 25) but we also allow the members to bring their children at convenient times of their summer schedules to give their families first-hand interaction with volunteerism, starting them off with the preparation of food for the families of the patients and even allowing them to assist in the management of the children waiting for their surgical screenings. Some of these volunteer children have gone on for training and returned over the years as professional volunteers (Fig. 26).


**Fig. 23.** Patient transportation vans like this one are often supplied for our patients by the community or governmental family assistance programs such as DIF in Mexico.

Sometimes the CME courses are presented either before or after the actual surgical days with invitations given to all of the local professional community with the assistance of the local Rotary or other service clubs who will host the auditorium. They may even elect to charge a nominal fee for the symposium lectures in order to gather funds for helping them offset their expenses in helping the programs for the children and their mission expenses. We have found this to be a mutually beneficial situation, which also serves to enhance the education of the local professional community on the patient care given and how they may continue that care throughout the year between clinics.

## UNIVERSITY ACADEMIC AFFILIATIONS AND SUSTAINABILITY

We have found great stability for long-term success and sustainability to be provided by focusing responsibility for eventual “adoption” of your project mission site by a US-based academic institution, which has access to cleft/craniomaxillofacial surgeons, anesthesiologists, and dentistry and nursing professionals.

In addition to providing ongoing ambassadorial care for the children with modern and updated procedures and equipment, the host clinicians are able to share in international education

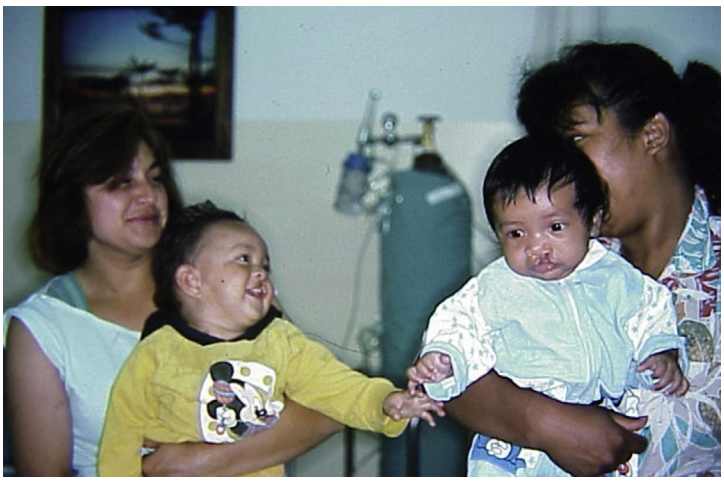

**Fig. 24.** Many children as well as their parents gain friendships over time and benefit from the longitudinal clinics occurring at the same dates several times per year to catch up on what might be expected later or to help the children gain friends. These friends may have a deep insight as to the social and developmental issues they face daily and can relate intimately. These clinics are sometimes the only chance for the children to see others who share their same facial differences, making them special friends.

exchanges and ongoing updates with sharing professional education opportunities. An example of this is the Ensenada, Mexico Thousand Smiles clinic we set up in 1985, which was groomed for adoption by the University of California at Los Angeles Oral and Maxillofacial Surgery Department. It has now entered its 31st year of quarterly operations; the Smiles of Los Cabos site in Southern Baja California, Mexico, adopted by the University of Michigan team, operates biennially. Each time a project mission site is developed, not only is thought and planning given to the eventual provision of leading specialty experts for a "full-team approach" for cleft care but also careful consideration is given to the exchange and invitation for academic leadership for sustainability and assurance of excellence of modern care.

In addition, the host site clinicians should be invited and sponsored to membership with the American Cleft Palate/Craniofacial Association (ACPA); we try to do this early in the process so we can instill in them an early vision of adherence to the Parameters for Evaluation and Treatment of Patients with Cleft Lip/Palate or other Craniofacial Anomalies (ref. revised edition November 2009: ACPA Parameters of Team Care, http://www.acpa-cpf.org/uploads/site/Parameters_Rev_2009.pdf).

We have examples of foreign members of our teams not only joining actively and attending these annual conferences but also availing themselves of visiting scholarship positions and taking the various techniques home, where their volume of cases greatly exceeded their US counterpart center mentors. Through their sharing of their professional experiences later, they have thus added valuable insights and statistical data to the international databases, reporting on evidence-based outcomes.

**Fig. 25.** A professional CME Symposium hosted by the Smiles International Foundation for the Mechnikov Medical Center professionals in Dnepropetrovck, Ukraine using the lecture from our visiting professors during their Craniofacial Cleft Surgical Mission Project, Smiles of Ukraine.

**Fig. 26.** This young woman is helping the volunteer Rotary group prepare lunches for the families and children obtaining professional treatments and screening during a mission clinic in Mexico. She also is shown helping hold a flashlight during an intraoral examination later that same day. Some of the families of volunteers have had their children become inspired with the charitable efforts and pursue medical/nursing careers themselves, and, due to the length of time of our clinics (more than 30 years thus far), have returned themselves to participate in their professional roles.

(An example of this is Dr Gabriela Saenz and the naso-alveolar-molding cases done at the Hospital de Ninos, San Jose, Costa Rica, with more than 1000 cases done in last several years in preparation for their cleft lip/nose procedures after her travels to the United States, arranged by the recipient of a Smiles International Foundation education grant for team experience resulting in the Center for Craniofacial Management at Hospital de Ninos, San Jose-Costa Rica; Fig. 27).

## TEAM REPLACEMENT AND REGENERATION

*"Succession for Children and Family's Treatment Continuity"*

Sustainability with academic affiliation is only part of ensuring cases will be successfully followed with philosophic and technique continuity. In every project mission site, the team positions must be duplicated and regenerated constantly and consistently due to the process of "life happenstance" and the inevitability of changeover from these life events affecting the team members.

"A true leader is one who trains others to lead and provides his own replacement" (author unknown). Nowhere else, in my opinion, can there be a more sound philosophy applicable to provide this team preplacement and regeneration necessary for succession, which will ensure that the children and their families will have continuity of quality care in order for them to enter society as a fully functioning adult member.

## FINANCIAL ALCHEMY
### *Matching Grants and Crowd-Sourcing*

No project mission team article would be complete without mention of how to financially cover the expenses. Although my personal philosophy has been to have a total "dog in the race" buy in by each professional volunteer and rely on the tremendous personal satisfaction reward that each of them gains from giving of their time, skills, finance for travel, and soul in the essence of service to others, I have become seasoned enough to understand that individual circumstances exist whereby this is not always possible for everyone at the volunteer level. If we wish to keep talented and caring individuals in the group for many years, some sponsorship must necessarily occur.

This sponsorship can be garnered in several different ways. Departmental outreach "charitable funding" given by the academic alumni, sponsorship for specialty residents and fellows from related equipment manufacturers, global and district financial grants from Rotary International and Districts who have been made aware of the international service project opportunities, and personal donations or tithes, which can ALL be placed into a Nonprofit 501(c)(3), Tax Exempt Organization for tax deduction benefits, can then be matched with other grants and multiplied by discounted equipment purchases, airline miles, and charitable travel agency contributions. All in all, it is not unusual to obtain a range of matched dollars from 4:1 up to 8:1 with the proper financial proposal preparations. This, with planning of what is needed, can provide your team and the host site with adequate equipment, which can stay in place for the ongoing surgeries (Fig. 28).

Again, by using the local project site's community support networks already present, such as Rotary or the other service nongovernmental organizations, many times they will donate meals and lodging, which lessens the financial load of the reliably returning volunteer professionals (for example, the Rotary Club of Tecate, Solmar

**Fig. 27.** Dr Gabriela Saenz is shown here preparing a naso-alveolar-molding appliance for a baby with cleft lip and palate at the Children Hospital in San Jose, Costa Rica. After the Pacific Clinical Research Foundation (Smiles International Foundation) presented her pediatric surgical colleague, Dr Roberto Herrera G, with a scholarship to attend the Parkland Memorial Hospital Craniofacial Unit, Dr Saenz joined him in Dallas, Texas and worked with Dr Andersen, later returning to Costa Rica to work with the technique in her cases at the newly formed Craniofacial Unit at the Hospital de Ninos. She has now more than 1000 cases treated with this approach and brings her experience with her to the meeting of the ACPA to compare results annually.

Foundation and Rotary Club of Los Cabos, and the DIF organization of Campeche with the Mayan Smiles missions all donate either all or part of the housing and meals for the visiting teams).

In fact, one good example of creative fund-raising for local support is that done for many years by the Rotary Club of Rohrmoser, Costa Rica, who provided meals and hotels for our teams while developing the Craniofacial Center at the Children's Hospital in San Jose, serving all of the cleft population within the Central Americas who presented for care there regardless of country of origin. Because the team members brought with them professorial-level specialty-expertise from around the globe and had been invited speakers at numerous international conferences, the local Rotary asked our CME-accredited foundation to host symposia at each clinic to focus attention on the project as well as to give continuing education updates for the surrounding country's professionals and practitioners in the subjects of hypotensive anesthesia for craniofacial surgery, fiber-optic intubations, pediatric maxillofacial and cleft surgical techniques, dental implantology, and rehabilitation prosthetics for maxillofacial defects, among others. A small fee was gladly paid to the Rotary Club registering the participants and was considered by them to be a "donation" to the cause for the free surgical care by local practitioners, elevating their professional expertise as well as promoting knowledge of the care given with the project.

This and other community fund-raisers all supported the large entourage for the weeks of service several times annually in that country until they too began to be self-sufficient and sustainable with their own craniofacial center at the Children's Hospital.

**Fig. 28.** Dr Moses (*far right*) is shown presenting a matching grant, which funded a large specialty equipment grant for the harvesting of bone for the craniofacial patients treated at the Smiles of Los Cabos mission project site. Also present in this photograph (*from right to left*) are Rotary Assistant Governor Cesar Rodriguez, Dr Mike McQuary, and Rotary President Oscar Nunez.

Of course, now we are also living in an age of crowd-sourcing, and one professional couple from Michigan showed me just how easy it is to crowd-fund a project, which was short a few thousand dollars for the purchase of sterile disposable supplies for one of their missions at the CaboSmiles site in just a matter of days enlisting a plea to help a child, *"Eat, Speak, and Smile."* This funding source should not be overlooked in this age of connectability to millions of souls via the Internet as a quick and readily available remedy for specific funds.

Regardless of your method or philosophy of funding, I do find that the more responsibility you place back onto each of the volunteers to either contribute or raise their own expense funding, the more dedicated and consistent a volunteer you will end up with. Give them a responsibility and ownership for their life of service, for we all strive for this eventually for fulfillment of our deeper life meaning. Responsibility builds resilience.

## SUMMARY

I have discovered 3 truths in this journey of more than 41 years of charitable project mission care. One is to find and live the spirit of gratitude. Not only for all of the blessings found in our personal and professional lives but also for the opportunity to find an outlet for our inner need to serve in a meaningful fashion.

The second truth lesson is this: to live each day to the fullest and to do this with a true purpose of service to others. This lesson makes one stronger at the time when you feel those forces that are brought upon you and allow you to overcome them in order to be able to fulfill this chosen purpose, which is in need of your grateful service.

This brings us to the third truth. Be kind: to yourself and to others for any limitation or setback brought by one's own actions or externally. Everyone gets better through their struggles, and if you can only see this as a mechanism for growth, you can be forgiving and kind. With these 3 lessons in mind, it would be hard not to live a rich and rewarding life both personally and professionally.

Below are listed several service opportunity projects with their contacts. Although it is, by no means, complete or fully comprehensive, I hope it can give you some options to begin to serve as a surgeon who can share your specialized knowledge in the arena of cleft and craniofacial project mission care.

Definition of greatness: "Someone who looks back daily and says, 'I did something of worth,'" Eric Greiter, PhD, Rhode Scholar, Philanthropist, Naval Seal.

Volunteer Opportunity Contacts

- Drawing Alegria
  - Contact: Francisco Garzon, Executive Director Canada
  - francisco@fgteam.ca
  - 905-275-9400
  - Volunteer Link: http://drawingalegria.com/about-us/
- Facing Futures Foundation
  - Contact: Barry Steinberg, MD, PhD, DDS, Founder
  - Volunteer Link: http://facingfutures.org/index.html
- Free to Smile
  - Contact: Byron Henry, DDS/Stacy Henry, Founders
  - Volunteer link: http://www.freetosmile.org/
- Mercy Ships
  - Contact: Donald K. Stephens, Deyon Stephens, Founders
  - Volunteer Link: http://www.mercyships.org/
- Operation of Hope
  - Contact: Jennifer More Trubenbach, President
  - jtrubenbach@cox.net
  - 949-463-1795
  - Volunteer Link: http://operationofhope.org/?utm_content=drjeffmoses%40yahoo.com&utm_source=VerticalResponse&utm_medium=Email&utm_term=http%3A%2F%2Fwww.operationofhope.org&utm_campaign=A%20fun%20Blessing%20update…%20Union%20Tribune%2C%20San%20Diegocontent
- Sharing the Journey International
  - Contact: David Cunning, DMD, Jacqueline J. Cunning, PA-C, Founders
  - Volunteer link: http://stji.org/
- Shares International
  - Contact: Michelle Gross, Executive Director Florida
  - Michelle.Gross@flhosp.org/
  - Volunteer Link: https://www.floridahospital.com/shares/understanding-our-mission/cleft-lip-and-palate-program
- Smiles International Foundation
  - Contact: Jeffrey J. Moses, DDS, FAACS, Founder/President
  - Volunteer Link: http://smilesinternationalfoundation.org/home0.aspx
- Uplift Internationale
  - Contact: Jaime Yrastorza, DMD, Founder
  - Volunteer Link: http://www.upliftinternationale.org/about-us/uplift-international-board-of-directors/

**APPENDIX 1**

## Patient Record/Photograph Use Consent Document

The surgery on_____*(name of patient)* is supported by the Smiles International Foundation (SIF) as an international children's charity working to eradicate the prevalence of cleft lips and cleft palates.

SIF maintain medical records on the patients undergoing surgery. These records include information such as: the names and addresses of patients and their parents, clinical diagnosis, other relevant medical health information, surgical procedures and results. The records also include pictures and videos.

SIF uses these records for reviews of surgical quality, education, evaluation, and public relations and marketing and promotional purposes as well as use in social media by the persons working during the clinic. The personal health information contained in the medical records will be maintained by SIF. Authorized persons, such as physicians, publishers, and promotions and marketing personnel as well as other medical personnel will have access to the records and the database and be able to use this for Smiles International Foundation purposes.

Additionally, SIF will keep your health information private and confidential by implementing security standards that limit access to the database to only authorized personnel as determined by SIF. SIF also will allow you to view the data contained in the medical record database and remove your name and health information from the database upon request.

I understand the information written above. I give my permission to send Smiles International Foundation a completed Medical Record Form for myself *(if of the age of majority in proper jurisdiction)* or my son or daughter from any other medical provider.

I give Smiles International Foundation to use this health information for quality assessment, education, evaluation and public relations purposes as well as for marketing, book and article publications. This permission includes use in the social media including Facebook, Twitter, Email, or other Internet Forums. I understand that this media may result in the information used to be accessible indefinitely, and may be unable to be erased or removed from the digital cloud.

_____ _____

Signature of Patient/Parent/Guardian (Circle) Date

_____ _____

Signature of Witness Date

**APPENDIX 2**

## Registration and Waiver of Liability

Print Name of Participant: _____

Participant Address: _____

_____

Phone: _____ Cell: _____ Fax: _____

E-mail: _____

In case of Emergency Call or Contact:_____

Phone_____

I am aware of the risks associated with participation in a medical mission to _____ [name of country] which is supported by Smiles International Foundation for which I have volunteered. Accordingly, I, for myself, my heirs, representatives or assigns, hereby unconditionally release the fore-mentioned, its agents, representatives, employees and other volunteers from any liability whatsoever arising from such risks including, but not limited to death or personal injury by accident, sickness, disease, weather, terrorism, damage or theft which may be sustained by me as part of the medical mission to _____ [name of country] in which I will be participating. I know, understand and appreciate these risks and knowingly assume them.

Participant's Signature: _____

If Minor Participant's Parent/Guardian Signature _____

Date of Signature: _____