

SICKKIDS- GUWAHATI COMPREHENSIVE CARE CENTER (GC4)

EDUCATIONAL EXCHANGE PROJECT

Ronald M. Zuker, MD, FRCSC, FACS Professor of Surgery

The SickKids-GC4 Educational Exchange Project was spawned in November, 2009 on an Operation Smile mission trip to Guwahati. Guwahati is the Capital of Assam in the Northeast of India with Bhutan to north and Bangladesh to the south. In a rare tripartite collaborative effort between our NGO (Operation Smile), industry (the Tata Corporation) and government (the State of Assam), we forged a plan to treat all of those affected by cleft lip and palate in the state. With a population of 30 million and very little prior surgery for the condition, we estimated there would be about 25,000 surgical procedures to be done. Initially, we worked at the state-run government hospital in Guwahati on the shores of the powerful Brahmaputra River.



I personally operated there on cleft patients in the original operating theaters, with a team of local and international surgeons, nurses, anesthesiologists, dentists, child care workers, as well as ancillary personnel directing medical records, social issues, travel and accommodation facilities for our patients.



Hundreds came, hundreds were operated on, but unfortunately hundreds were also turned away because of insufficient facilities, poor nutrition, the lack of infectious disease work ups and sheer lack of manpower. I clearly remember doing the 500th case at the make shift Cleft Care Unit with a trainee from the U.S. Navy. We formed strong alliances with the local personnel and administrative staff at the institution. My wife and I formed a warm bond with the Chief Minister of Assam and his wife, and we were fortunate enough to be able to demonstrate to him the huge impact the surgery would make on these people. Not only would it affect their physical and psychosocial wellbeing, but it would put them into the work place to be productive and allow for the most important marriage unions to proceed. The international team of surgeons from Africa, Western Europe, and the local surgeons from India were simply spectacular. It was then that we pledged to work with the Guwahati Team in their plan to shed the State of Assam from the stigmata of cleft lip and palate. We committed to return with a team to Guwahati and to host members of the Guwahati team in Toronto to a two week subspecialty cleft training program. A new wing was being built on the public hospital and we literally watched the men work on the bamboo scaffolds as we operated. The unit was completed in 2010 and was a state of the art operating facility. In concert with this was the development of excellent pre-op preparation team, transportation system from the rural areas of Assam to the institution, and facilities available for lodging families. The Postoperative Care Unit was also fully renovated and designed to serve our needs.



At SickKids, we first hosted a nutritionist and a child-care worker for two weeks of intensive teaching around cleft care. The child-care worker would in fact return for a three month intensive training program in Child Life. She became the first fully qualified child life therapist in India. She contributed enormously to the GC4 project. We also hosted two anesthesiologists, who worked not only in the operating rooms but also in our Intensive Care Unit. Later, we hosted the two pediatricians, who worked up the patients preoperatively, set guidelines for surgery and then looked after the patients during the postoperative period. While here, these pediatricians rotated through all components of our cleft program, as well as the Intensive Care Unit. We have also hosted the two full time Indian surgeons who are working at the GC4. They were focused on not only the technical aspects of surgery, but also the organizational components of our cleft team. They were able to rotate through all aspects of our cleft program, seeing our nursing program on 8C, our Speech and Language Department, our Audiology Department, visit with our ENT surgeons who work closely with us, our colleagues in our Dental and Orthodontic Department, where both pre-surgical and post-surgical care is rendered and of course the Operating Room. They worked closely with our cleft lip and palate coordinator in order to get a broad picture of how our cleft program operates.



Our SickKids team returned to Guwahati in the spring of 2012. We took two fellows, two staff surgeons, a speech-language pathologist, an occupational therapist and an epidemiological researcher. We spent two weeks teaching, training our fellows, and helping with the organizational structure of the GC4. The facilities and the care rendered to the patients were outstanding. What is most impressive, however, was the collaboration, cooperation and job contentment of the entire GC4 staff. Everyone from the cleaning people to the medical director was empowered to make the process run smoothly and efficiently. The set up for preoperative evaluation was outstanding, as compared to the difficulties experienced two years prior. There was very little in the way of cancellations for nutritional or infective problems, as this had all been solved at source and the facilities, both operative and postoperative, were clean, well looked after and state of the art. The expertise of the medical and paramedical staff was excellent and the quality of care rendered was superb.



This collaboration and dedication was in evidence when we had a power shortage. There had been a typhoon hundreds of kilometers away, which knocked out the power grid and affected our hospital. With no emergency generator and only a two hour battery back-up, we arranged with the local power authority to stagger our power for two hours in the morning and two hours in the afternoon at 1:00 p.m. Our medical director asked the staff to come in at 7:00a .m. so that we could start surgery and utilize the power that was available. We worked for two hours on battery power, then two hours on state power, then two hours on battery power, two more hours on state power and two hours on battery power until we ran out. There was no discussion or complaint about the inconvenience that many people and their families had to endure. They just rallied behind the team leader and forged ahead. We left the GC4 in 2012 with sadness, as we had had such a wonderful time, but joy seeing the wonderful work that had been accomplished. The fellows we took for training were overjoyed as to the experience they had had, and hopefully will continue their cleft exposure and return with their own trainees to the GC4.



Our next trip to the GC4 was in the winter of 2014. Again, we took two fellows and this time there were two staff surgeons and one speech pathologist. Cases were prepared for us and the system ran incredibly efficiently. We were delighted to have two operating tables at our disposal, where we were able to train our fellows, and also demonstrate surgical procedures to the other surgeons and trainees that were visiting the unit. All in all, it was a wonderful educational experience, both for our trainees and for the people there. Our team did over 50 cases and our trainees left feeling very fulfilled. Once again, the organizational structure was superb. There were very few cancellations or concerns regarding nutrition or infection issues and it was apparent that the safety of all of the patients was a priority. Fortunately, there were no significant power outages that affected our surgery.



It was very impressive to see the impact that SickKids has made on the GC4. I personally was very happy to see that our efforts in the educational exchange process have been successful, in that many of our SickKids practices have been introduced to the GC4 Unit. From a surgical standpoint, we have demonstrated the Fisher cleft lip repair to them. They have adopted it almost completely and I was delighted to see some of the results from both local and international surgeons, with very happy patients and very happy surgeons. As indicated previously, there was very little malnutrition in evidence. When the patients are selected for surgery, they are screened in their villages and any nutritional concerns are addressed there rather than after they travel to the Center. Similarly, there were very few infectious disease cancellations. This is also because the patients were in top shape prior to travelling to the Center. I was delighted to see the efforts of our child life workers being transposed to the GC4. In the preoperative room, the child life therapist was present with her 1-Pad, entertaining and comforting the children and the adults. The child life therapist went into the Operating Room with the parents while the children were induced for anesthesia. The child life therapist even stayed in the Operating Room with the adults undergoing cleft lip repair under local anesthesia. She would talk to them, comfort them, hold their hands and do the sorts of things that our child life therapist would do here. The anesthesiologists delivered the same type of anesthetic that one would expect at SickKids, having been exposed to our techniques. One

anesthesiologist even read the newspaper in the exact same position as ours
would. 8





So what does the future hold? We plan to host a surgeon and a dentist next month for a two week period. We are now at the point of introducing naso-alveolar molding as a preoperative technique, as well as alveolar bone grafting in the mixed dentition phase and orthognathic surgery in the late teens. These components will take time to evolve, but the training and the exposure will begin now, with this upcoming visit. This spring, we also plan to host two members of the nursing team. We will demonstrate our techniques of postoperative care, particularly as it relates to the cleft palate patient, alveolar bone grafting and orthognathic surgery. At the GC4, they have introduced a four month fellowship training program for surgeons. We have agreed to host these fellows after their training for a two week period. This would be a top up period for cleft lip and palate exposure. Currently, they have had one trainee from Bangalore and one trainee from the Congo, who hopefully will be visiting us this spring as well.



We plan to return next year with two more of our fellow trainees. The process has worked very well for both the GC4 and for our trainees. We will again have two tables at our disposal and hopefully we will be able to attract anesthesia staff and anesthesia fellows from SickKids as well. Hopefully, members of our orthodontic team will also be able to attend. This ongoing exchange provides excellent opportunities for all concerned.



With respect to the Guwahati Comprehensive Cleft Care Center, they are moving forward in a number of different ways. They are setting up satellite units for some of the simpler procedures, with the more complicated ones to be done at the GC4. They are developing regional block techniques, particularly for the cleft palate patients. This is very helpful in this setting, as minimal postoperative analgesia is required. They are introducing naso-alveolar molding and have done several cases thus far and will continue to do so. They will also shortly be introducing alveolar bone grafting and possibly in the future orthognathic surgery. We are working with them to improve speech outcomes and particularly to develop a follow up speech and language program that fits their needs. We are exploring opportunities to collaborate with NGO's in Toronto, as well as with a well established unit in Southern India, with a goal toward developing post cleft palate speech protocols for therapy and follow up.



There is ample room for research in this high volume, highly efficient unit. Some of the

technical aspects of cleft lip repair are being presented and published by the surgeons, as well as some of the protocols on antibiotic use, infection rates and general flow through the unit. Other studies currently under way are evaluating the age limits of effective palate repair and the psychosocial benefits of lip and palate repair to this population, even at an older age.



For me, it has been a wonderful experience to be a part of the SickKids GC4 Exchange Program. We look forward to many more years of collaboration with the very supportive team in Guwahati, and taking advantage of the numerous opportunities that are presented to us.

