

Notes from the Field

Angela Martinelli, DNSc, RN, CNOR, CAPT, USPHS



Surgery for a Smile

In June 2005, I traveled as part of a team of health care volunteers to the Republic of Tatarstan, a constituent republic of the Russian Federation located in the central region of the Eastern European Plain. We were participating in a medical mission organized by Operation Smile, a nonprofit, volunteer, medical services organization that provides free reconstructive surgery to children and young adults around the world who have cleft lips, cleft palates, and other facial deformities.

This trip marked Operation Smile's first medical mission to Kazan, Tatarstan's capital city. Located on the Volga River, Kazan is an important water transport center. While we were there, the city was celebrating its 1,000th anniversary.

Members of our team hailed from 12 U.S. states and such countries as Australia, Canada, Columbia, Italy, Panama, and the Philippines. The 50-member group consisted of a field medical director (who was also an anesthesiologist), four additional anesthesiologists, a certified registered nurse anesthetist, a plastic surgeon team leader and five plastic surgeons, a pediatric intensivist, a pediatrician, two dentists, four operating room nurses (of whom I was one), eight preoperative and postoperative nurses, a nurse clinical coordinator, a speech therapist, a child life specialist, a biomedical technician, two medical records personnel, a student sponsor and four high school students, and a mission coordinator.

CAPT Martinelli is the emergency response coordinator in the Office of Force Readiness and Deployment, Office of the Surgeon General, Rockville, MD. She has been a nurse volunteer with Operation Smile since 1993.

In Kazan, our team worked alongside physicians, nurses, and other providers from the Children's Clinical Hospital of the Republic of Tatarstan (CCHRT). This large hospital has a total of 735 beds (332 surgical and 403 medical) and employs 292 physicians, 697 nurses (called "sisters" in Russia), and 767 junior sisters (less experienced nurses who work under the supervision of other, more senior sisters) and other specialists.

While CCHRT has been recognized as one of the best children's hospitals in Russia, treating over 25,000 pediatric patients annually, it does not have the staff, specialty expertise, or equipment to handle the volume of reconstructive surgeries our Operation Smile team performed in just one week. Our staff was able to serve children who otherwise would have had to spend years on a waiting list—or who may never have been able to receive surgery. Furthermore, CCHRT can only pay for surgeries for children living in Tatarstan, but through Operation Smile, we were able to serve patients from other Russian republics as well.

PREPARING FOR SURGERY

The surgical team spent two weeks in Kazan, and the postoperative team stayed an additional week to ensure that all patients were recovering well. The first week was devoted to setting up the operating rooms, recovery room, and preoperative and postoperative wards and screening patients for surgery.

As an operating room nurse, I was directly involved in setting up the operating suites. While we were there, we occupied five operating beds. Due to our busy schedule, it was often

necessary to have two operating tables in each room (Figure 1).

We brought most of our own equipment to Kazan, including electrocautery units, portable suction devices, monitors, and anesthesia vaporizers supplied by Operation Smile. Although we were familiar with these supplies and their setup, there was a potential for compatibility problems when installing them at the host facility. For this reason, among others, our biomedical technician—who hailed from the Philippines—was absolutely vital to the safe and effective functioning of our team.

Since we were working side-by-side with our Russian counterparts on all aspects of our mission, a small group of hospital employees and college students who volunteered as interpreters were extremely helpful in easing communication. While setting up the surgical suites, my interpreter and I developed a "cheat sheet" with the names of common instruments, sutures, and supplies, which we posted on the operating room wall. In addition to facilitating our work, this sheet made for many thoughtful exchanges and laughs between my Russian colleagues and I.

Patient screening took place over the first two days of the mission. During this time, our team evaluated all 175 children who had come to the hospital. Many of the children were from the surrounding area, but some had traveled as long as 10 hours by train to be evaluated. One or both parents accompanied most children, but there were several children from a nearby orphanage who were brought to the hospital to receive our care.

The children presented with a variety of problems, including primary

cleft lips, cleft palates, and previously repaired lips and palates in need of revision. While we would have liked to provide surgery to all patients who needed it, our time and resources were, by necessity, limited, and we worked hard toward the goal of helping the most patients we could in the time we had. Priority was given to relatively low-risk patients who had the greatest chance of being ready for discharge before we left Kazan, so that we could ensure the best outcomes in our short time there. Operation Smile has a policy that children who require intensive reconstructive surgery are considered as candidates for the World Care Program, which brings children and young adults to the United States, through sponsorships, for surgeries that are too complicated to be performed during in-country missions.

To ensure the safety of the procedures and minimize complications, the team also set age requirements for certain surgeries. As a general rule, children under three months of age are not considered for surgery on Operation Smile missions. In addition, in most cases, the team used six months as the minimum age of eligibility for cleft lip repair and one year as the minimum age for cleft palate repair and combination (both lip and palate) operations. The pediatricians, surgeons, and anesthesiologists discussed each case individually, however, and exceptions could be made for lip repair in patients between three and six months if there was unanimous agreement from the field medical director, anesthesia team leader, plastic surgery team leader, clinical coordinator, and pediatric intensivist. For all combination surgeries, this team plus the operating surgeon had to agree on the appropriateness of the procedure and the availability of proper postoperative care before the surgery was scheduled.



Figure 1. An operating room at the Children's Clinical Hospital of the Republic of Tatarstan, set up for Operation Smile surgeries with two operating tables.

All surgical candidates needed to be in good health and free of medical contraindications to surgery (such as infections), as evaluated by the team leaders. Children with asthma or gastroesophageal reflux and those who were malnourished or emaciated (there was a weight requirement as well as an age requirement) were given special consideration to make sure they were strong enough for surgery. We also took extra caution in scheduling patients who might have difficult intubations (because of such conditions as microstomia or small mandibles), those with wide bilateral clefts, and those with certain medical syndromes or cardiac problems.

IN THE OPERATING ROOM

During the week of surgery, we operated on approximately 20 children per day. In total, 94 children received 112 plastic surgery and 56 dental procedures, including 10 primary cleft lip repairs, 50 primary palate repairs,

20 palate fistula repairs, and 14 cleft lip revisions. In the operating room, my job was to provide overall support to the anesthesiologists, surgeons, and the Russian operating room nurses.

The surgical schedule, which was posted on the wall to facilitate communication, was arranged so that the anesthesia team leader could assign a pediatric anesthesiologist (or another Operation Smile anesthesia provider experienced in working with young children) for all patients under the age of two. These young patients were scheduled as early in the day as possible so that they would not become dehydrated while adhering to their nothing-by-mouth orders. Cleft palate repairs were scheduled toward the beginning of the trip to ensure that the surgical team would be on-site in the event a child had to return to surgery because of bleeding, malunion, or other postoperative complications.

Continued on next page

Continued from previous page

Throughout the mission, safety was our priority. All volunteers abided by Operation Smile's International Programs Medical Policies and Procedures to ensure safety and quality of care. If, at anytime, a member of the team felt that there was a safety concern, they were encouraged to voice the concern so that the situation could be evaluated before proceeding. We all understood that paying attention to safety is particularly important when working in a critical care environment with people who speak and read different languages, come from different cultures, and have different methods and standards of practice.

MEMORABLE PATIENTS

One child that stands out in my mind, my first surgical patient, was a three-year-old girl with a unilateral cleft lip (Figure 2). She was a particularly happy and active child who had traveled with her mother six hours by train to reach the Operation Smile mission site. Other than her cleft lip she was healthy and met all requirements for surgery, which was uneventful. Since she was my first patient on the first day of surgery, I was able to check on her each day and watch her speedy progress throughout the week. By day four she had recovered well (Figure 3).

Another child, one of the orphans, made a particular impression on Dr. Earl Bryant, a team pediatrician. One night during dinner, Earl described this young boy, who was awaiting cleft palate surgery. Because of crossed eyes, said Earl, the boy needed to cock his head to the right and slightly upward to look at you, "actually, a jaunty, rather 'cool'...maneuver that was as charming as his shy smile." When the boy wasn't walking the halls of the hospital, Earl told us, he could be found in his cot on the ward full of noisy toddlers, propped on his right elbow, "a casual position that



Figure 2. A three-year-old girl with a unilateral cleft lip.



Figure 3. The patient after her successful cleft lip repair.

aligned his good eye perfectly." He was quiet and often watched the commotion of the busy ward with what Earl described as a "wise, slightly amused detachment." Each day of the Operation Smile mission, Earl would salute him—it was their own special greeting.

The child's surgery was scheduled near the end of the week. Unlike the other children, who were all accompanied by a parent or an orphanage attendant, this boy faced his surgery alone. When he returned to his ward in obvious pain, Earl observed how the other mothers in the room attended to him: "The mother from the next bed quickly came to his side and swabbed the blood-tinged saliva from his chin. Another began to drip cool liquids into his mouth with a syringe. Another mom from across the room offered words of comfort. I saluted. He was an orphan, but he was not alone."

A FULFILLING EXPERIENCE

After 14 days filled with laughs and tears, the surgical team left Kazan tired but very satisfied. Not only had we accomplished our mission but we also had had a great deal of fun. We made wonderful new friends, both parents and children, and developed close ties with our Russian colleagues.

On the last day of surgery, while boarding the bus to leave the hospital, we were approached by one father, who spoke very little English. He clutched his heart and in English said, "From my heart, thank you for my son." This simple yet powerful statement summarized our stay in Kazan for us and brought us all to tears. We had performed small miracles for a small group of children. Moreover we had learned, yet again, that we are all more alike than different and that everyone—regardless of their language, religion, ethnicity, or origin—wants the best for their children. ●

The opinions expressed herein are those of the author and do not necessarily reflect those of Federal Practitioner, Quadrant HealthCom Inc., Operation Smile, the U.S. government, or any of its agencies. This article may discuss unlabeled or investigational use of certain drugs. Please review complete prescribing information for specific drugs or drug combinations—including indications, contraindications, warnings, and adverse effects—before administering pharmacologic therapy to patients.