

# A Temple Student's Mission: Oral Health Intervention for a Peruvian Orphanage



By Bari Levine



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**I**t was the summer of 2012, and I was enrolled in Temple University's dual DMD/MPH (Masters in Public Health) program. I had recently finished the first year of the Masters program and was thrilled to start dental school in the Fall. There I was sitting in an MPH class, relieved, as I just gave my final presentation about the status of oral health among

children in the United States. During a break between presentations, a fellow classmate, Dr. Kathya Zinszer, caught my attention from the back of the classroom. "Bari, can I see you for a second after class?" she whispered. I nodded. Little did I know that the simple question she was about to ask me would transform my life and help me discover my passion in dentistry.

After class, Dr. Zinszer excitedly said, “I was just asked to be the supervising physician for a medical mission trip to an orphanage outside of Lima, Peru with Temple medical students. Could you possibly help me get toothbrushes and toothpaste donated for the children?” I quickly responded, “Sure, but can I come?”

After inviting myself on this mission trip with four Temple medical students and Dr. Zinszer, I not only immediately fell in love with the children at La Sagrada Familia orphanage in La Ventanilla, Peru, but I also noticed the need for oral health education and supplies for the 800 children who call La Sagrada Familia their home. There is a dentist, Dr. Julio, who works part time at the orphanage, but he mostly sees individuals from the outside community who pay a small fee for his services. Dr. Julio will see the children when they were in pain; however, no preventive care is given due to lack of time, money and supplies. During my brief visit that June, I had a vision. I vowed that I would return to the orphanage the next year, using my resources in the DMD/MPH program to help improve the oral health and overall health of the beautiful children.

I recruited my mother, Dr. Sheryl Radin, as our supervising pediatric dentist and three fluent Spanish-speaking Temple dental students—Maira Estrada, Michael Saba, and Julia DeLuca. That spring, I spent six months researching and designing a culturally sensitive, evidence-based oral health intervention in order to assess the oral health of the children at the orphanage in August 2013. Once we discovered their baseline oral health status, we would plan a return trip in 2014 to provide clinical care for the children. During our one-week trip in 2013, 140 children at the orphanage completed oral health questionnaires, were screened for various oral health indicators, and received oral health education we created specifically for the program, including one-on-one toothbrushing instruction.

We also trained, in Spanish, nine supervisors, who were either staff members or university students living at the orphan-

age, on a range of oral health topics that any parent/guardian might find useful. These supervisors were trained because studies have shown that when children are supervised while they brush their teeth, the incidence of dental decay goes down significantly. However, no studies to date have proved that supervised toothbrushing is effective in an orphanage setting, and so we encouraged the supervisors to watch the children while they brush their teeth at night. From our initial assessment, with a final sample size of 125 children, we found the following:



*Bari shows the children the proper way to brush their teeth.*

**52%** of the children had at least one dental cavity

**80%** of the children had the highest levels of dental plaque

**11%** of the children had at least one dental abscess

**42%** of the children did not own a toothbrush

**After one week, we saw statistically significant changes in oral health behavior and knowledge.**

This information showed us not only that our brief oral health intervention was effective, but also that the oral health of the children at the orphanage was neglected. The information we gathered was also pivotal in informing future education and dental care in 2014.

Not long after we returned from the orphanage in September 2013, we obtained a signed legal agreement between the orphanage and Temple University’s Kornberg School of Dentistry that would allow Temple faculty and dental students to provide both education and clinical care to the children. Our program was also taken under the wing of the Temple chapter of the American Student Dental Association (ASDA). With ASDA’s help, we began planning right away.



*A doll with teeth offers the children a fun way to practice brushing.*



*Bari, the other volunteers, and the children celebrate a successful mission trip.*

My vision for 2014 included bringing a team of dentists and dental students to follow up on the research implemented in 2013 and also provide a high standard of comprehensive dental care to the children at the orphanage. While speaking to a woman at NOMAD, the

portable X-ray company, I asked her if she could put me in contact with an organization who had used their equipment before. I did not realize that such a simple question would change the fate of our program!

Amy at NOMAD put me in contact with the KinderSmile Foundation (KSF, [www.kindersmile.org](http://www.kindersmile.org)), a non-profit organization that has provided free dental care to underprivileged children in New Jersey and abroad since 2007. Very soon after, I had a phone call with Dr. Nicole McGrath, the CEO/founder of KSF. She elaborated on her use of the NOMAD--but she also expressed great interest in joining us in 2014. After a few phone calls with Dr. McGrath and the Junior Board of the KSF, it was set--the KSF would be joining us in 2014!

Our team went from nine to 23 people in the blink of an eye. KSF had three dentists, one dental hygienist, one photographer and nine college students (to provide oral health education) on their team. Our Temple team included my parents, Dr. Sheryl Radin (a pediatric dentist) and Dr. Robert Levine (a periodontist), as our supervising dentists. We also had seven Junior and Senior Temple dental students: Habib Asmaro, Dhara Patel, Steve Rees, Nebyat Yonas-Arbizu, Zach Harrison, Alesia Walsh and me. Our team worked relentlessly to fundraise for monetary and dental material donations. With help from sponsors such as THE NEXTDDS and the Henry Schein Cares Foundation, we were able to meet our goals and provide a wide

range of dental services to the children at the orphanage.

Our group left from JFK airport on June 23rd, 2014 with 31 bags full of dental supplies, and 23 people radiating with excitement in our matching royal blue team shirts. On our first day, we went straight to work: we started by re-screening, educating and treating the children from 2013. Each day we brought new children to the clinic to be seen. We also trained, screened and provided dental care for 14 new supervisors, using the same education as 2013. In five days at the orphanage, we were able to screen, educate and treat over 150 children and supervisors.

Our program is unique in that we had a fully-functioning dental clinic operating at the orphanage. We had three portable dental units and brought all of our own instruments and dental materials. Every patient received screenings, education, cleanings/fluoride varnish application, and, as needed, digital x-rays, scaling and root planing, restorations, and extractions. We also have established a local contact with Colgate in Mira Flores, Peru and a local dental school in Lima to ensure the orphanage has dental supplies and care year-round.

The children were grateful for what we did for them, from relieving their dental pain to giving them toys and big hugs because they were such great patients. La Sagrada Familia is without a doubt my happiest place on earth, and I plan to organize dental trips to the orphanage every year until the community is able to provide the children with quality dental care and supplies without our assistance.

Our 2014 trip was a dream—and it would not have been possible without our wonderful Temple team, the KinderSmile Foundation, and sponsors such as THE NEXTDDS.

*Bari Levine is a dual DMD/MPH Class of 2016 student at the Temple University Kornberg School of Dentistry. For more information on the program or how to make a donation, please contact Bari at [barilevine6@gmail.com](mailto:barilevine6@gmail.com).*



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—Bari Levine

The 2014 Peru Mission Trip is the first of many planned contributions to Outreach Initiatives by **THE NEXTDDS.**