Editorial

Global Exploration: East Africa

Dr Buischi delivering individualized oral hygiene training to the Daraja girls and school nurse.

Access to oral health care across one's life cycle is critical to overall health. Unfortunately, billions of people in underserved areas throughout the world lack access to basic oral health care. There are many reasons why this is so, poverty being the biggest cause of all. Disparities in dental health care are well known in populations of low socioeconomic status. Children suffer disproportionately and therefore should receive priority care. Establishing good oral health in childhood will most likely lead to good oral health for a lifetime.

Oral diseases, particularly caries and periodontal diseases frequently resulting in tooth loss, affect not only health but also esthetics and self-esteem. This can be a deterrent to improving the socioeconomic status of vulnerable populations. The major risk factors of these diseases are well known and can be easily self-managed given the proper education. Developing programs to assist vulnerable populations in improving their oral health are extremely low cost and highly impactful. By shedding light on such issues, we hope to alert readers to the need for oral health care in vulnerable populations and to foster a discussion on our responsibilities as health professionals to assist in solving these challenges. Opening up our minds and hearts to a global clientele with infinite unmet health needs is an unprecedented opportunity to close some of the gaps of existing global inequalities. Inspiring other dentists and health professionals to follow this road would be, undoubtedly, a plus.

As extreme poverty persists in Kenya, the limited financial resources are directed toward greater health concerns, such as HIV/AIDS, and the prioritization of oral health remains very low. Oral health accounts for only 0.0016% of the Kenyan Ministry of Health budget, and the availability of dentists per capita in the public sector is extremely low at 1 per 378,000 people.

I first learned about Daraja Academy in Kenya, a boarding school for girls of poverty, in early 2013 through a close friend, Deborah Santana, at the opening night of the documentary *Girls of Daraja*. The scenic beauty of rural Kenya and the magnetism emanating from each one of these special girls were mesmerizing. However, many of the girls had mottled teeth due to an excessive intake of fluoride, which naturally occurs in their

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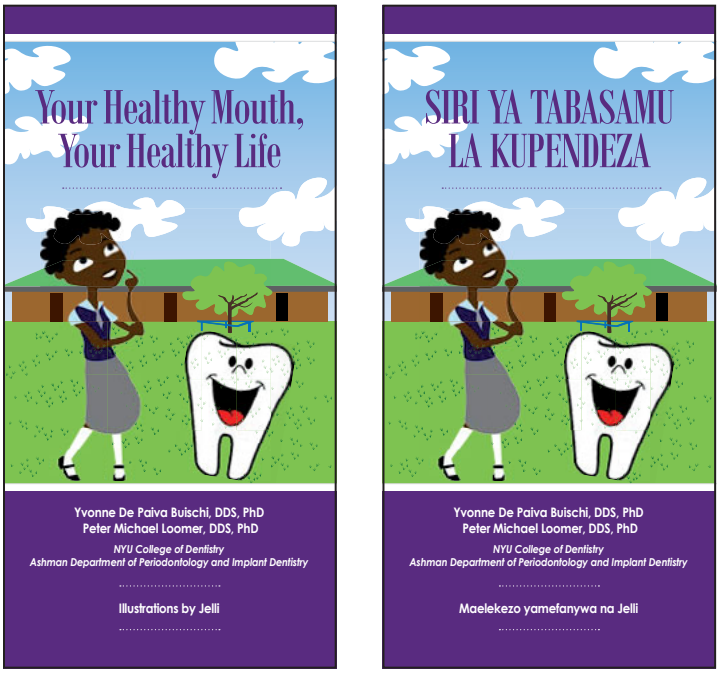

English and Swahili booklets are available to support the girls' advocacy work.

water. This, in combination with visible gingival inflammation, halitosis due to gingival bleeding, and the presence of many open carious lesions, led to low self-esteem among the girls, and many were smiling uncomfortably in the documentary. Consistent with national trends, most Daraja girls have never visited a dentist. The Daraja girls immediately caught my heart, and I felt an indescribable need to take action in order to promote better oral health among them. Together with Peter Loomer, then the Chair of Periodontology and Implant Dentistry at New York University, we developed a comprehensive program to improve the general and oral health of these girls.

The Kenya Oral Health and Education Program at Daraja Academy began in 2014, and its purpose is to establish a comprehensive health promotion program that will significantly improve the oral health of the girls and promote healthier behaviors. It includes oral and general health education, individualized oral hygiene instructions, and dental care. Seminars for preventing oral disease were conducted for the students and staff, including the school nurse and administrators. The school nurse, the only health care provider available for the girls' medical/dental needs, was trained in individualized oral hygiene measures and the application of fluorides. She was also trained on the importance of sugar restriction for caries prevention and for lowering the risk of obesity and related systemic diseases. Between our visits, the school nurse follows up not only with the girls' oral hygiene but also provides fluoride treatments and reinforcement of healthy behaviors. In addition to these protocols, after 4 months of intensive training in health promotion, 10 girls were selected to act as leaders to take responsibility for weekly check-ins of their peers to ensure they maintain their improvements in oral hygiene, diet, and exercise habits. The project also focuses on providing leadership training to the girls, empowering them to act as oral health advocates in local communities. These girls then provide oral and general health education to their families and friends, even to children in the neighboring schools and villages. A booklet to support their advocacy work has been prepared, and it is available both in English and Swahili.

The outcomes of the project are evaluated through comparison of annual clinical examinations, disease indices, and behavioral assessments. Thus far, the project has had a significant impact in improving the girls' oral health and dietary habits (report in preparation). Of particular importance is that the girls have been trained to become leaders in their communities, encouraging improvement of oral and general health in their peers, families, and friends. In this manner, this low-cost intervention can have a widespread impact, especially in underserved and vulnerable populations. Our mission is to motivate, educate, train, and subsequently empower students to self-sustain their improved oral and general health and assist those in their communities to do the same, and we hope the program will serve as a model to be replicated in other areas of Africa and beyond. For more information regarding this program, please visit dental.nyu.edu/koes.

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