I would like to begin by thanking the Class of 1995 for their generous donation of $1,000 towards my participation in the Conestoga Eye/Princeton University/Partners for Andean Community Health (PACH) pediatric ophthalmological medical mission in Ecuador. Seeing as my application to the Class of 1995 Service Fund ended up being my only successful application for monetary assistance, the Fund’s contribution to the overall $3000 cost truly made the difference between my participating in this trip and my having to give up on the endeavor. Although still a significant financial burden, I was able to cover the remainder of the trip solely thanks to the generosity of the Class of 1995, and for that I am extremely grateful.

In summary, this year’s medical mission was an absolute success and I am proud to announce that we were able to screen over 1,100 indigenous, underprivileged, rural, Ecuadorian children for eye disease and eyesight problems, resulting in approximately 125 children being prescribed and provided corrective lenses, and several either receiving or being referred to surgeries. It is important to note that for the vast majority of the children, this was their first chance to receive an ophthalmological evaluation of any sort, let alone to receive glasses or a surgical consult. For some, it is possible that this was their first encounter with health care professionals. This—paired with the fact that many of these children are at increased risk of eye problems due to both genetic predispositions and the latitude and high altitude which minimize atmospheric protection from the sun’s damaging effects—highlight the importance of the medical mission that we executed. Additionally, disfiguring and disabling eye conditions combined with the cultural tendencies of the indigenous communities can often lead to ostracization and/or profound discrimination, adding more importance to our work.

This year, our team was comprised of four pediatric ophthalmologists, several medical technicians and general volunteers, a tour guide/community liaison, some nonprofit workers from FIBUSPAM (the Ecuadorian counterpart of PACH), and a lecturer, graduate student chaperone, and a dozen students from a class run by the Princeton University Spanish Department. The members of the Spanish class and I were the primary translators between the Ecuadorian and American volunteers, as well as between our team and the students, parents, and teachers that we interacted with to facilitate the screening sessions. Fortunately, our group was organized, cohesive, and efficient, in great part thanks to the stellar leadership and experience of Dr. and Mrs. David Silbert, who have been running this mission trip and ones like it for years. In fact, the size and efficiency of our group allowed us to screen nearly as many children this year as we did on the trip last year, despite us only being able to visit four schools this year as opposed to last year’s five.

In general, we screened children ages 3-18, and did so using what I can only refer to as an “assembly line” method. Put simply, we established several stations in a particular order, each manned by anywhere from one-to-six people. After the children were registered and received a personalized form on which all of their measurements and medical information could be recorded, they entered the “assembly line.” The first station involved taking hands-free eye measurements using devices called autorefractors, followed by the stereotypical visual acuity station, during which the children had to identify letters/shapes located on a poster several feet away. Based on the autorefractor measurements and the children’s’ performance on the visual acuity exam, they were either deemed healthy and allowed to go, or were shuttled forward to be prepared for examination by the ophthalmologists. This preparation involved dilating their pupils with medicated eyedrops, a challenging and time-consuming process that required patience, skill, and the ability to communicate with and reassure the children. As one can imagine by putting himself in the shoes of the young children we served, the prospect of having a tall, unfamiliar, foreigner putting drops in your eyes is quite scary and uncomfortable, and the subsequent light sensitivity and impaired vision that are temporary effects of the dilation do not help ease the feelings of fear. Nonetheless, dilation is necessary in order for the ophthalmologists to properly assess the patients. Luckily, my previous experience with this task, along with the perseverance, professionalism, and skill of my fellow undergraduates, allowed us to successfully run this station without issue. Finally, after their pupils were completely dilated, the children received some final autorefractor measurements before being examined by a physician and, if necessary, prescribed lenses, fitted for glasses, and/or referred for surgery.

The reason for the multiple autorefraction measurements was twofold. Seeing as autorefractors measure the refractive error of one’s eyes (as is done during a standard post-dilation eye exam), they were used to determine whether or not a child needed to see the doctor, as well as to provide measurements for corroboration between machines and for comparison with the physician’s measurements. The other reason for taking the measurements was investigation based. Using multiple autorefractors is allowing us to compare the measurements from various models to the “gold-standard” measurements obtained by the ophthalmologists. These data were collected and recorded, and I, Dr. Silbert, and some employees from Conestoga Eye will be analyzing them in hopes of publishing conclusions about the reliability and accuracy of different models. Since autorefractors do not require technical expertise and can be used by laypeople, determining the most accurate models/designs can be beneficial to other prospective medical missions which are heavy in non-expert volunteers, minimizing the need for trained professionals as well as the number of children who falsely fail the initial screening.

All in all, it was a pleasure and an honor to participate in this medical mission. The satisfaction of bridging cultural divides and providing life-changing, meaningful services to those in need is unparalleled. With this being my second time participating in the medical mission, I was able to get an enhanced appreciation for the work and its long-lasting effects, for the efforts of my colleagues, and for the importance of our roles as translators. Interacting with the children and community members is truly enlightening, and I am a better person for having done so. Moreover, it has further served to validate my desire to become a physician scientist. I am very much looking forward to continuing with post-mission efforts to analyze the data and publish our results, with the hopes of improving and/or facilitating future missions, thereby increasing the amount of lives improved. Finally, this trip gave me another chance to witness what worked and what could be improved upon in such a setting, and I am confident that I will be able to incorporate such knowledge for similar endeavors in the future.

 

 