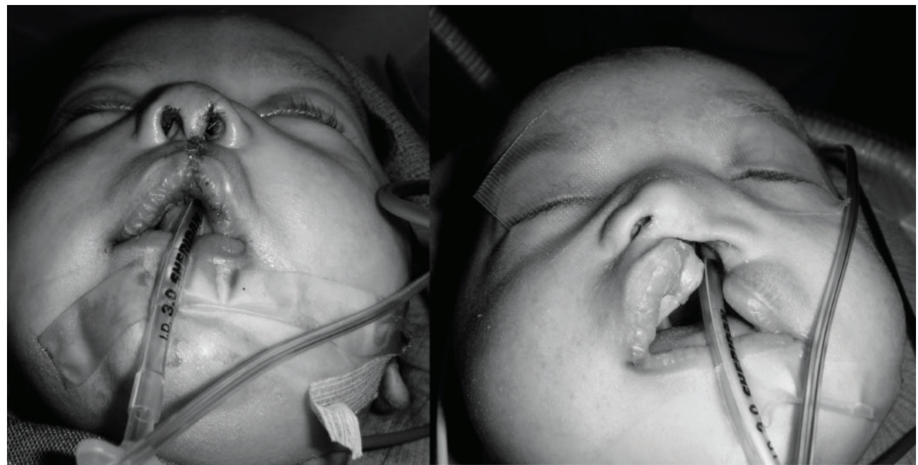
Reconstructing Lives:
A Broader Perspective on Global Health

Alexander Ryu
Harvard Medical School

Around the world, not far removed from the broadly-based endeavors of public health experts and infectious disease specialists, plastic surgeons are operating to change lives in ways that statistics cannot fully capture. Unlike many parts of global health, the impact of plastic and reconstructive surgery on patients is characterized by profound depth, as opposed to breadth, which more easily lends itself to headlines. Specifically, although plastic surgical procedures often do not save lives, sixty-six percent of global disability-adjusted life years (DALYs) lost are attributable to conditions treated by plastic surgeons.[1] Furthermore, the suffering these disabilities cause is often not effectively captured with DALY measures, the standard for most literature on global health morbidity. Yet, just beyond the reach of global public health initiatives, masses of patients suffer functional and developmental deformities in communities that are underequipped to perform the necessary reconstructive treatments. Plastic surgeons from the US and similarly developed nations frequently take time away from their domestic practices to travel and address these needs through practice and education; even though demand still eclipses supply, these individuals' efforts are integral to global health.



A cleft palate surgery. *Courtesy of Samir Mardini.*

To understand the need for plastic surgical care in the larger global health arena, the lives of affected patients should be examined. Consider a one-year-old boy with a cleft palate, born to a middle class family in Vientiane, Laos. His condition is not life threatening and thus is unlikely to receive care through any easily accessible sources. Yet, without surgical care in his near future, his speech will permanently suffer, drastically limiting his potential. With a skilled surgeon, this child's life course could be dramatically altered in just two hours. A similarly high-impact case was successfully addressed by Dr. Stephen Sullivan, of the Alpert School of Medicine. As Sullivan told the HCGHR, a Haitian woman had been brutally burned on her face, neck and arms after igniting a kerosene lamp, which had accidentally been filled with gasoline. These burns had confined her to nearly two years of inpatient burn care, which had ultimately failed to heal her massive open wounds. It was not until she received skin grafts, performed by Sullivan on a volunteer trip, that she was able to return to her home and resume a normal life.[2] Similar cases abound throughout less-developed countries. Given that the need for this care is tremendous, the question then becomes: how can this be addressed effectively and sustainably?

Plastic surgeons, like Drs. Samir Mardini of Mayo Clinic, Helena Taylor of Alpert School of Medicine and Dennis Orgilliv of Brigham and Women's Hospital, are determined to spend time offering their skills abroad in order to serve pressing global needs, despite their hefty institutional case loads. They generally do so in the context of one- to two-week-long trips organized by their institutions or by charitable organizations. Along with Sullivan, these surgeons have treated hundreds of international patients–from earthquake victims in Haiti to previously-untreated middle-aged patients with facial deformities in India–but is this current model the most effective for serving the world's plastic surgical burden? Like many other global health efforts, on the ground, the reality of this approach to care is simultaneously beautiful and tragic.

Young surgeons often travel abroad

with the drive and enthusiasm to handle a continuous deluge of operations, and they are met by lines of patients, often hundreds long. From an idealistic approach, this isn't initially a problem. As Mardini reflects, "the great thing about plastic surgery is the ability to treat ailments from head to toe." [3] Despite the absence of much of the surgical technology available in the U.S., plastic surgeons are still uniquely able to perform many life-changing surgeries. Taylor echoes this sentiment: "[a plastic surgeon] can still do a lot with just the scalpel, pick-up and needle driver." [4]

However, hopes of addressing each patient's concern collide with the reality of global health work all too soon. Even with extensive experience and the efficiency that comes with it, surgeons are unable to meet the massive need for their services in the relatively short time that these trips give them. They must resort to various methods of prioritizing patients: Mardini described to the HCGHR a numeric scale used by his teams to prioritize the potential developmental and functional restoration of his cases. Safety and a patient's ability to maintain post-operative care are also considered, with some acknowledgement of aesthetic needs as well.[3] The complexities of triaging, however, are a mere subset of the many considerations in orchestrating a successful service trip and, more importantly, in making a longitudinal impact. As all four surgeons told the HCGHR, political and cultural factors are strikingly relevant.

Potential patients and families await surgery. *Courtesy of Samir Mardini.*

Orgill receives many requests to meet from government officials and hospital administrators; he generally accepts, in order to better understand the local culture and to ensure that logistics flow smoothly. Although he is not operating, he explains that this time is not wasted because collaboration with local surgeons and nurses is essential to providing a lasting impact. To that end, Orgill notes, "You simply can't come in and say you'll do it our way or the highway." [5] Instead, teaching and learning flow reciprocally among all involved health professionals.

Orgill has also participated in a mission to teach microsurgery to Vietnamese surgeons and, in the process, became aware of a painful reality: these surgeons stood only sustain their practices through cosmetic surgeries, as the government largely did not reimburse for reconstructions.[5] Structural healthcare issues like these present a significant barrier to meeting global plastic surgery demand, which means that teaching local surgeons how to perform new procedures is only part of the solution. Taylor was forced to confront the structural barriers of disaster management when she found herself struggling to find an unoccupied operating room in post-earthquake Haiti, despite the constant influx of patients and doctors.[4]

Considering the experiences and contributions of plastic surgeons to global health, a formidable case can be made for their integral nature in the field, which is different, but no less important, than other medical specialties. The adaptability of their procedures to various contexts is notable and means plastic surgery has a high utility among many patient populations. However, there are presently multiple barriers which prevent the provision of care by local physicians, which is ultimately the most sustainable strategy for plastic surgical care. At this time, a combination of teaching and operating by foreign surgeons seems to be the best alternative. The next time "global health" enters a conversation, it is important to recognize the expansive scope of the field, which goes far beyond treatment of pandemic diseases to include profound impact on individuals' lives and a diversity of involved medical professionals.

[1] Semer, Nadine, Sullivan, Stephen and John Meara. "Plastic Surgery and Global Health: How Plastic Surgery Impacts the Global Burden of Surgical Disease." Journal of Plastic, Reconstructive & Aestheic Surgery. 63 (2009): 1244-1248

[2] Sullivan, Stephen. Personal Interview. 20 Feb 2012.

[3] Mardini, Samir. Personal Interview. 21 Feb 2012.

[4] Taylor, Helena. Personal Interview. 20 Feb 2012.

[5] Orgill, Dennis. Personal Interview. 16 Feb 2012.