MISSION ACCOMPLISHED?

THE HISTORY, CURRENT STATUS, AND ETHICS OF PLASTIC SURGERY MISSION TRIPS

Sara A. Neimanis, MD

December 1, 2022









OVERVIEW

History of medical and plastic surgery missions

Current status and major organizations

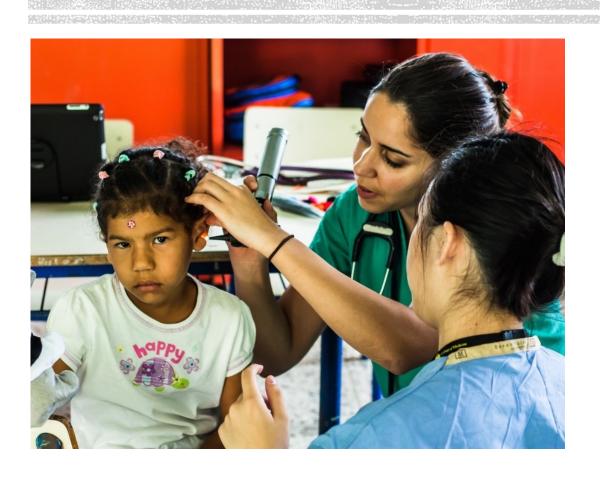
Approaches and models

Ethical issues

My experience



WHAT IS A MEDICAL MISSION?



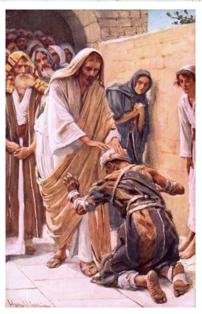
- A group of people administering medical care
- Traditionally refers to a Christian organization (has taken on a broader meaning over time)
 - Evangelism and healing the sick are important tenets of the New Testament
- Usually refers to "Western" groups traveling to Africa, Asia, or Latin America
- Now often referred to as: medical service trips, global outreach, global surgery/health, humanitarian aid, etc



HISTORY

- Colonialism and religious missionaries from Europe were prominent throughout the 1700s through early 1900s
 - Focused on obtaining land and spreading religion, mainly Christianity, to Asia, Africa, and North and South America
- Medical care was incorporated though the intention was generally religious conversion
- Treatment of leprosy (given Biblical connotation) was used to help convince people to convert to Christianity in Nigeria and other affected countries







McKay A. Towards a History of Medical Missions. *Med Hist*. 2007;51(4):547–551.

FIRST ORGANIZATIONS

- 1830s: E.C. Bridgman from Massachusetts served as a Protestant missionary to China
 - Noted that the outcomes of cataract treatment by the Western missionaries were better than those by the Chinese doctors
- 1834: Peter Parker was sent to China as the first Protestant medical missionary to China at the request of Bridgman
- Several other Americans followed Parker and formed the Medical Missionary Society of China—the first society for medical missions in the world
- The Edinburgh Medical Missionary Society was the first European organization and was running until 2002







EARLY PLASTIC SURGERY MISSIONS

- Although plastic surgical procedures have been performed for thousands of years, the specialty developed out of WWI
- Much of WWI and WWII took place on "Western" land





HIROSHIMA MAIDENS

- 25 girls/women severely disfigured by the bombing at Hiroshima
- Initially cared for by Japanese surgeons but with little success
- Journalist John Hersey brought attention to these women
- Norman Cousins, editor of The Saturday Review had the idea to bring these women to the US in 1955
- Americans donated money to help them (many felt guilty)
- Rather than US surgeons travel to Japan, the women were brought to the US and had reconstructive surgeries at Mt. Sinai Hospital
- Were treated by Dr. Bernard E. Simon, Dr. William M. Hitzig, and Dr. Arthur Barsky in more than 140 surgeries



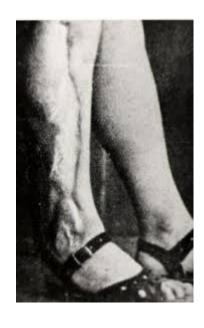
Нівозніма'я Ѕнісеко Nіімото, 1954 & 1956 From horror to triumph.





OTHER WARTIME MISSIONS

- Mt. Sinai surgeons treated Polish survivors of the Ravensbruck Nazi concentration camp who had undergone medical experimentation, but again on US soil
- Effectiveness of sulfonamides, a new synthetic antimicrobial at the times, was tested by intentionally infecting victims with Steptococcus species, Clostridium, and tetanus
- Wounds were intentionally further contaminated with woods shavings, glass, etc.
- Some who survived had soft tissue destruction and deformities





CHILDREN'S MEDICAL RELIEF INTERNATIONAL

- Temporary hospital set up in Saigon (~1967-1975)
 - 28 beds with modern OR and recovery room
- Plastic surgeons, pediatricians and anesthesiologists from around the world volunteered
- Volunteers included Dr. Arthur Barsky from Mt. Sinai (treated Hiroshima Maidens), Dr. John Mustarde of Glasgow, Scotland, Dr. William Rush, pediatrician from Michigan, and many others
- Vietnamese nurses worked there with the American surgeons







Wynn SK. Plastic Surgery At Children's Medical Relief International Hospital In Saigon. *Plastic and Reconstructive Surgery*. 1969;44(1):63-67.

DOCTORS WITHOUT BORDERS



- French organization founded in 1971 after the Biafra secession (Nigerian Civil War 1967-1970)
- No political or religious affiliation
- Set up refugee camp missions in Thailand during the Vietnam war
- Provide medical and surgical treatment but also assist communities with sanitation, malnutrition, women's health, HIV awareness, etc









CLEFT/CRANIOFACIAL MISSIONS

- Unclear when and how these started, but may have stemmed from the humanitarian aid missions in Southeast Asia in the 1960s-1970s related to the Vietnam War
- Possibly related to increase in congenital anomalies related to Agent Orange exposure





OPERATION SMILE

- Founded in 1982 by William P. Magee, Jr., DDS, MD and his wife, Kathleen Magee who is a nurse and social worker
 - Dr. Magee trained in plastic surgery at Eastern Virginia Medical School and received a Fulbright Scholarship to study with Dr. Paul Tessier in Paris in 1975
- Founded Operation Smile after he traveled with a group of medical volunteers to the Philippines to repair cleft lip and palate



OPERATION SMILE



- Has performed ~300,000 free surgeries for kids in need
- Provided 35,000 surgeries for 20,000 patients last year
- Conducted 166 missions in 28 countries
- Have established 29 care centers that provide care year-round







SMILE TRAIN

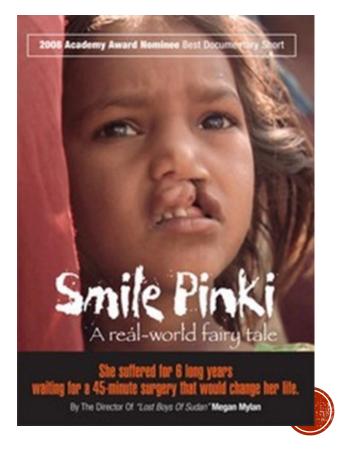
- Started in 1998 by Brian Mullaney and Charles Wang who had previously worked with Operation Smile
- The focus was to train and support local surgeons rather that just fly doctors from Western countries to perform cleft operations
- First missions were to China in 1999
- Began to work in India in 2000
- In 2014 the organization performed its millionth cleft operation



SMILE TRAIN IN THE MEDIA

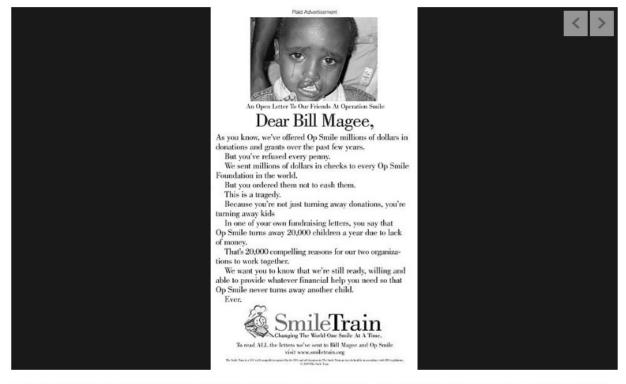


- Aishwarya Rai became Smile Train's first goodwill ambassador in 2011
- Smile Pinki won the 2008 Oscar for Best Documentary (Short Subject)
 - Sponsored by Smile Train
- Has surpassed Operation Smile as largest cleft charity group



'Smile' charity leaders in midst of decade-long feud

Elizabeth Simpson Dec 20, 2009



Advertisement in the Richmond Times-Dispatch from the New York-based Smile Train, chiding Operation Smile and its CEO and co-founder Bill McGee. (Handout from Brian Mullaney)

OTHER CLEFT ORGANIZATIONS









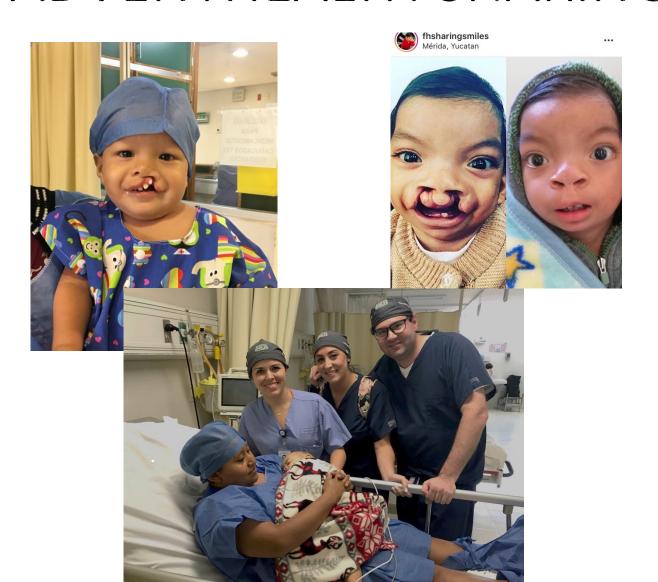






ADVENTHEALTH SHARING SMILES









LOCAL ORGANIZATION



- HUGS (Help Us Give Smiles)
 - Founded in 2003 by Dr. Vito Quatela
 - Focuses on cleft lip & palate, microtia, other facial deformities
 - Does regular trips to Guatemala, Ecuador, Peru, and Vietnam







https://www.helpusgives miles.org/aboutus

OTHER TYPES OF MISSIONS

- Almost anything you can think of!
 - Medicine and pediatrics
 - Vaccinations
 - Women's health
 - Nutrition
 - Sanitation and infectious disease
 - Burn
 - Hand surgery



MISSION MODELS





International Open Access Journal of the American Society of Plastic Surgeons

Plast Reconstr Surg Glob Open. 2017 Apr; 5(4): e1273.

Published online 2017 Apr 25. doi: 10.1097/GOX.000000000001273

Plastic and Reconstructive Surgery in Global Health: Let's Reconstruct Global Surgery

Karen Y. Chung, MD[™]



PMCID: PMC5426866

PMID: 28507847



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Plastic and Reconstructive Surgery in Global Health: Let's Reconstruct Global Surgery

Karen Y. Chung, MD[™]

- 4 major models for global outreach:
 - Vertical (1-way)
 - Vertical (2-way)
 - Horizontal
 - Diagonal



VERTICAL (1-WAY)

DESCRIPTION **ADVANTAGES** DISADVANTAGES May not address other Disease specific diseases/needs/ social Ready to deliver package Fast implementation determinants VERTICAL (ONE-WAY) of surgical care, teaching Scalable · May yield redundant and faculty, research training, poorly coordinated efforts Donor attractiveness equipment and supplies, · May divert funds from other Efficient delivery financial support diseases and other priorities Traditional Often privately funded May increase dependency Often short-term · May not be sustainable



VERTICAL (2-WAY)

	DESCRIPTION	ADVANTAGES	DISADVANTAGES
VERTICAL (TWO-WAY)	 As above Limited to surgeon or patient transfer to a higher income country for training, or care 	As aboveValues the individual	As aboveRisk of brain drainNot sustainableLimited impact



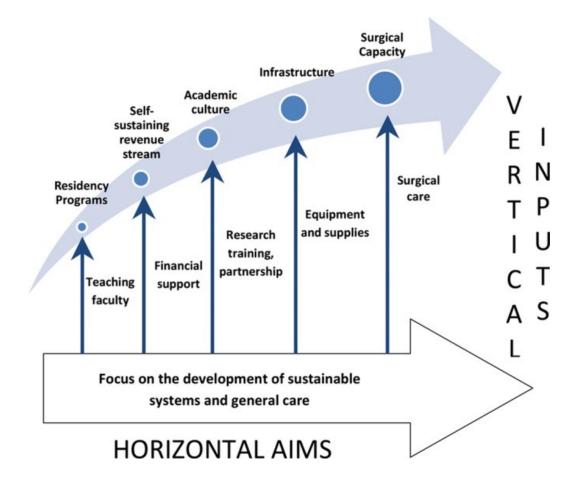
HORIZONTAL

	DESCRIPTION	ADVANTAGES	DISADVANTAGES
HORIZONTAL	 Focuses on healthcare infrastructure Long-term interventions and investments 	 Strengthens systems as a whole Benefits all patients, because of focus on primary infrastructure Builds capacity for long-term change 	 Long-term interventions may be less attractive to donors and funders Require functional state and local governments More difficult to measure the impact of horizontal interventions



DIAGONAL

 Combines the immediate effects of vertical models and the long term benefits of horizontal models





ETHICAL ISSUES





QUESTIONS I HAD WHEN GETTING INVOLVED IN GLOBAL HEALTH

- Is it good surgery? What are the outcomes?
- Are the surgeons/medical personnel qualified?
- Are the facilities safe?
- What about follow up? And the rest of cleft care?
- Are these countries not creating their own infrastructure because someone else will come do the operations?
- What racial and cultural issues might be involved?
- At the same time...is potentially sub-par surgery better than nothing?

































The Cleft Palate-Craniofacial Journal



Palatal Fistula Risk after Primary Palatoplasty: A Retrospective Comparison of a Humanitarian Organization and Tertiary Hospitals

Kimberly M. Daniels, M.S., Emily Yang Yu, B.S., Rebecca G. Maine, M.D., M.P.H., more...

Show all authors >

First Published February 22, 2018 Research Article





 Resurge team consisted of 15 board-certified or board eligible plastic surgeons (1 tellow per year) between 2005-2009

Palatal Fistula Risk after Primary Palatoplasty: A Retrospective Comparison of a **Humanitarian Organization and Tertiary Hospitals**

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Show all authors >

- 1936 patients total
 - 201 with ReSurge, 1612 at Huaxi and 123 at UCSF
 - Follow up rate was 57.7% for international group. 96 were included in analysis
- Fistula Rates (p < 0.001)
 - UCSF: 2.5%
 - Huaxi University Hospital: 12.8%
 - Resurge humanitarian team: 35.4%
- Older age and cleft severity associated with fistula formation



Palatal Fistula Risk after Primary Palatoplasty: A Retrospective Comparison of a Humanitarian Organization and Tertiary Hospitals

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- Why are the rates so much higher?
 - More technically complex palates in older patients
 - Environment, equipment, etc
 - Peruvian surgeon outcomes were tracked during missions and in usual practice
 - 25% fistula rate on missions and 3.8% at home
 - Surgeon experience?
 - ReSurge requires board certification or eligibility and letters from other plastic surgeons vouching for their experience with cleft repairs
 - Fellows were supervised
 - Lack of or deficient post-op care
 - Nutritional deficiency, adherence to instructions, etc

Description of Mexican Cleft Surgeons' Experience With Foreign Surgical Volunteer Missions in Mexico

Anna R. Schoenbrunner, MD, MAS,* Kristen D. Kelley, MD, MAS,* Taylor Buckstaff, BS,* Joyce K. McIntyre, MD,† Alicia Sigler, MD,‡ and Amanda A. Gosman, MD§

- Goal: Characterize Mexican cleft surgeons' own practices and experience with visiting surgeons
- Methods: validated e-mail study through 2 Mexican plastic surgery societies and the national cleft society
- Response rate was 30.6% (n = 81)
- "Decades ago, the Mexican craniofacial surgeon Dr Fernando Ortiz Monasterio coined the term "surgical safari" to describe visiting surgeons who came to Mexico to perform cleft surgery on Mexican children but who left behind serious complications. These complications occurred because visiting surgeons operated outside their scope of practice without proper follow-up care."

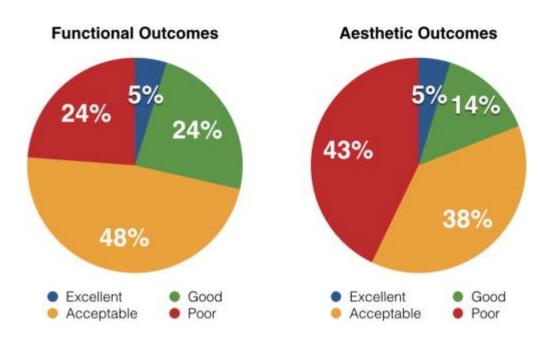
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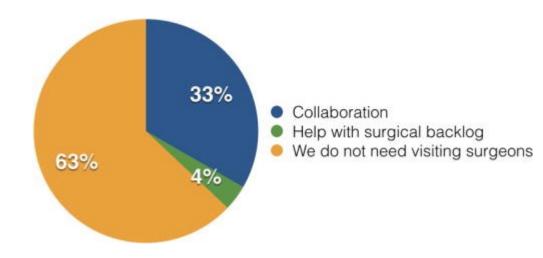
- 34.6% (n = 28) of respondents had direct experience with patients operated on by visiting surgeons
- Of those who had direct experience with patients operated on by visiting surgeons, 53.6% performed corrective surgery on these patients because of complications from surgeries by visiting surgeon
- Respondents each treated an average of 14.0 complications over the last 5 years
- 73.3% these surgeons were never paid for the corrective surgeries that they performed on patients operated on by visiting surgeons



Mexican surgeons' assessment of visiting surgeons' outcomes



Mexican surgeons' assessment of visiting surgeons' role in Mexican cleft care





ARE VOLUNTEER SURGEONS QUALIFIED?



Plastic Surgery

Description

Our plastic surgeons are highly experienced in comprehensive cleft surgical care. They are charged with performing a diverse array of cleft lip and cleft palate procedures on an aggressive timeline and continually balance providing the best possible patient outcomes and serving as many patients as possible.

Operation Smile

Qualifications

In order to be eligible as a plastic surgery volunteer with Operation Smile, you must fulfill the following criteria:

- Registered in a relevant specialty that included cleft lip and cleft palate surgical training and achieved highest level of certification available.
- Demonstrated <u>current cleft experience</u> and current professional training.
- Demonstrated clinical competence.

Application documents needed:

- Completed Plastic Surgeon application online, including three references.
- Copy of resume/curriculum vitae detailing current experience.
- Copies of diplomas and degrees.
- Documentation of Plastic Surgery specialty training.
- Copy of current license/registration in field.
- · Copy of Board certification (as applicable by country).

- Can go within 2 years of retirement but not later
- Chief residents may participate in the "Resident Leadership Program (RLP). This program allows residents to experience a mission under the supervision of a mentor"



LANGUAGE BARRIER

- Important to ensure that parents and patients understand the plan, preop instructions, and post-op care
- Qualified interpreters should be present





SPECIAL TOPIC

Volunteers in Plastic Surgery Guidelines for Providing Surgical Care for Children in the Less Developed World

William J. Schneider, M.D.
George D. Politis, M.D.,
M.P.H.
Arun K. Gosain, M.D.
Mark R. Migliori, M.D.
James R. Cullington, M.D.
Elizabeth L. Peterson, M.D.
D. Scott Corlew, M.D.,
M.P.H.
Andrew M. Wexler, M.D.
Randall Flick, M.D., M.P.H.
Allen L. Van Beek, M.D.

Knoxville, Tenn.; Charlottesville, Va.; Cleveland, Ohio; Minneapolis, Rochester, and Edina, Minn.; Austin, Texas; Spokane, Wash.; and Mountain View and Los Angeles, Calif. **Background:** A significant need is met by volunteer groups who provide free reconstructive plastic surgery for underserved children in developing countries. However, at present there are no consistent guidelines for volunteer groups in plastic surgery seeking to provide high-quality and safe care.

Methods: With these quality and safety standards in mind, in 2006, the Volunteers in Plastic Surgery Committee of the American Society of Plastic Surgeons/ Plastic Surgery Educational Foundation undertook a project to develop a detailed set of guidelines for volunteer groups from developed countries seeking to provide plastic surgery services to children in developing countries. To make the guidelines include both surgical and anesthetic needs, they were developed in conjunction with the Society for Pediatric Anesthesia.

Results: Guidelines for the delivery of plastic surgery care by volunteer groups to developing countries have been reviewed and approved by the boards of both organizations (the American Society of Plastic Surgeons/Plastic Surgery Educational Foundation and the Society for Pediatric Anesthesia). These include guidelines for the initial site visit, site and patient selection, staff and equipment that should be available, and procedures that can be safely performed based on the site and available facilities. Guidelines for assessment of outcomes, dealing with adverse outcomes, and quality improvement are also provided.

Conclusions: Any plastic surgery group undertaking an international mission trip should be able to go to one source to find a detailed discussion of the perceived needs in providing high-quality, safe care for children. The present document was created to satisfy this need. (*Plast. Reconstr. Surg.* 127: 2477, 2011.)



RESIDENT EDUCATION

SPECIAL TOPIC

The Role of Humanitarian Missions in Modern Surgical Training

Alex Campbell, M.D. Randy Sherman, M.D. William P. Magee, D.D.S., M.D.

Los Angeles, Calif.; and Norfolk, Va.

Background: Surgical trainees have participated in international missions for decades and are now seeking out these experiences in record numbers. Resident participation in humanitarian service has been highly controversial in the academic plastic surgery community, and little evidence exists elucidating the value of these experiences. This report examines the impact of international volunteerism on surgical training.

Methods: Twenty-one resident physicians who participated in the inaugural Operation Smile Regan Fellowship were surveyed 1 year after their experiences. Results: One hundred percent responded that participation in an international surgical mission had an overall positive impact on their lives, and 94.7 percent reported that they had achieved marked personal growth. Results demonstrate significant education in each of the Accreditation Council for Graduate Medical Education core competencies and insights into global health and cultural competency. One hundred percent "strongly agreed" that the Regan Fellowship was a quality educational experience, and 94.7 percent deemed the experience a valuable part of their residency training.

Conclusions: Resident physicians are calling for more international health opportunities, and they should be generously supported. A properly structured and proctored experience for surgical residents in international volunteerism is an effective instruction tool in the modern competency-based residency curriculum. These endeavors provide a unique understanding of the global burden of surgical disease, a deeper appreciation for global public health issues, and increased cultural sensitivity. Plastic surgery training programs can contribute mightily to global health and improved resident education by embracing and fostering the development of international humanitarian opportunities. A surgical mission experience should be widely available to plastic surgery residents. (Plast. Reconstr. Surg. 126: 295, 2010.)

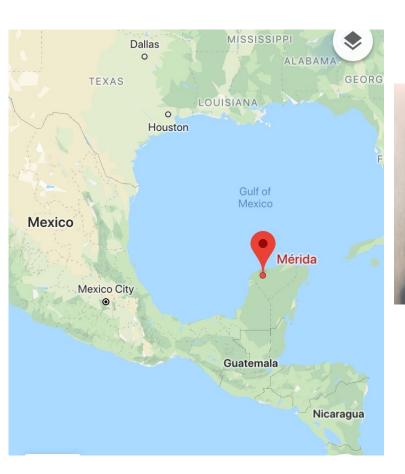




MY EXPERIENCE

MEXICO 2018





Dra. María Flores Méndez

Mérida, Yucatán

Certificado No. 422



YO SOY CIRUJANO PLÁSTICO CERTIFICADO







HUGS/TESS UNLIMITED: GUATEMALA



TESS UNLIMITED



- Helps provide cleft care for kids throughout Guatemala
- Helps parents with feeding
- Screens patients for surgical missions and provides follow up care
- Care not limited to surgery- also provides dental, speech, orthodontics
- Working on educating a local surgeon with help from Smile Train and other mission groups





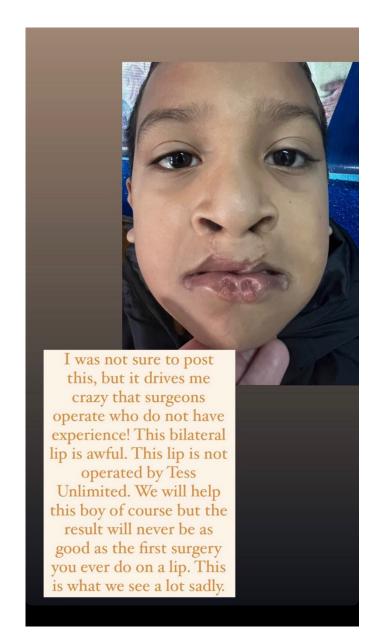
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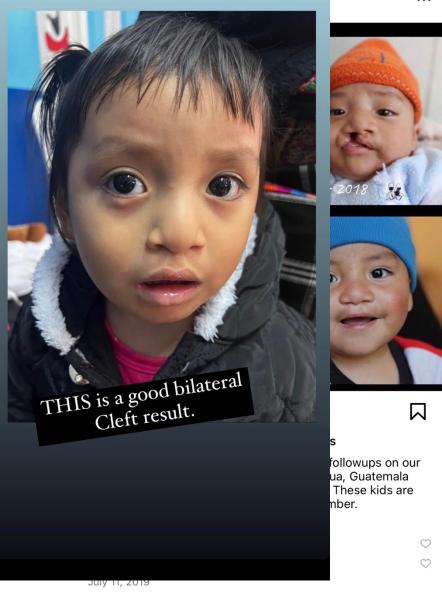
O 7

tessunlimitedguatemala Meet 11 year old Daniela vuch a brave young lady. The oldest, 4 younger siblings and her mom of 28 years old. Mom never found any help for her daughter until 2 weeks ago. A new nurse in the health center where she lives told her about us. We made everything possible to get her surgery today and it worked. She covered

....

 \Box







BUT WHY ARE WE EVEN THERE? WHY DON'T THEY GET THEIR OWN SURGEONS?





MONEY & RESOURCES

- Guatemala does not have a plastic surgery training program
- Surgeons who leave to train in plastic surgery don't come back...or do cosmetic surgery.
- The families can't afford to pay and insurance isn't good
- Mission groups can do a lot of surgery in a short period of time helping consolidate transportation, etc.
- Tess and HUGS rely on donations and volunteers





WHAT DO I GET OUT OF GLOBAL HEALTH WORK?

- A personal sense of pride
- Admiration for these incredible parents and how much they trust us
- Improvement in my own skills and teaching opportunities
- Cultural and language immersion
- The opportunity to travel
- Appreciation for the resources we have
- Perspective on how wasteful we are



TAKE AWAY POINTS

- Works towards a "diagonal model"
- Ensure volunteer physicians are qualified
- Take pride in your work. These patients deserve the best
- Be culturally sensitive. Don't make it a "surgical safari"
- Understand that not everyone wants us there
- Be safe. Safety should be taken as seriously as at home
- Enjoy and embrace the experience





THANK YOU

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