ENENCOURAGING ACTIVISM IN GLOBAL HEALTH THROUGH KNOWLEDGE, INNOVATION AND ENGAGEMENT

Haiti’s Reconstruction and the Future of Maternal Health

Gretchen Berggren, M.D., MSc.Hyg., and Blair Gifford, Ph.D., long time colleagues and contributors to the Center for Global Health (Dr. Berggren—respected advisor and Dr. Gifford, founder of the Center and member of the Executive Committee), share their latest work in Haiti - picking up where others left off.

It’s been almost five years since Haiti’s devastating earthquake.

Much has changed since January 2010, however, better access to healthcare remains a work in progress for the country.

Apart from infrastructural damages, Haiti’s health system suffered tremendous losses in human resources. For example, the entire second year class and most of the faculty at the Haiti National University School of Nursing were killed during the quake.

Hundreds of non-profit organizations and relief missions swept through Haiti in the international relief response, but most concentrated on short term problems, unable to plan for more long term sustainable reconstruction.

The country has been called the “NGO Republic of Haiti” due to the overwhelming presence of non-Haitian entities and monies.

With the emergency response to the earthquake receding into the past, Haiti’s Ministry of Health now faces a vacuum of facilities and personnel to handle clinical needs of patients.

An unfortunate irony of 1,100 non-profits coming into the country and offering free services is that the medical practices of Haitian doctors were disrupted.

As many local doctors were hired by NGOs at increased pay, the ability of government-based health organizations to re-recruit these doctors has been limited.

Having worked in Haiti before and after the quake, Gretchen Berggren, M.D., MSc.Hyg., and Blair Gifford, Ph.D., Professor of Global Health Management at the University of Colorado Denver Business School and Colorado School of Public Health are both well-versed in the nuances of Haitian culture, and the particularities of operating medical programs there.

While Dr. Berggren has worked largely in community outreach and childhood nutrition, Dr. Gifford approaches his work in Haiti from an administrative standpoint, helping to organize maternal care through centralized facility-based care.

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Expanding the Impact of Pediatric Plastic Surgery Missions in Guatemala from One to Many

Dr. Frederic Deleyiannis improving the quality of life for some of the poorest children in remote locations all over Guatemala by integrating genetics research in surgical missions.

Frederic Deleyiannis, M.D., M.Phil., M.P.H, F.A.C.S., is a Professor and Chief of the Department of Pediatric Plastic Surgery at Children's Hospital Colorado and the University of Colorado School of Medicine. He is the Director of the Cleft Lip and Palate Program, as well as the Craniofacial Microsurgery and Trauma Program in the Department of Surgery.

He is also a trained epidemiologist and biostatistician, and board –certified in two surgical specialties, Plastic Surgery and Otolaryngology – Head and Neck Surgery.

The combination of his training and commitment to improving the lives of his patients led him to embark on his first surgical mission to rural Guatemala in 2002.

Since then, he has committed extensive time to genetics research and clinical interventions to better understand the genetics and surgical outcomes behind facial clefting and microtia in some of Guatemala’s poorest children. He uses this research to expand the impact of his surgical mission trips from a few individuals to many.

Dr. Frederic Deleyiannis began surgical missions during his Plastic Surgery Residency at the University of Pittsburgh in 2002 working with the group, Children of the Americas (a non-profit group committed to providing medical and surgical care to the children of Guatemala).

Since 2002, Dr. Deleyiannis has participated in twelve pediatric surgical missions to Guatemala with the primary emphasis being on cleft surgery, burn reconstruction, and microtia repair (i.e. the reconstruction of the external ear).

Each year he has traveled to a different, remote location in Guatemala to such diverse cities as Jalapa, Tiquizate, Huehuetenango, and the border region with Chiapas. The populations that Dr. Deleyiannis has served are extremely poor and largely indigenous. Since 2013 he has served as the team leader for the surgical trip sponsored by Children's Hospital of Colorado to the Moore Surgical Center in Guatemala City.

As a trained clinician, as well as epidemiologist, Dr. Deleyiannis realized that his access to geneticists through the University of Pittsburgh would allow him to conduct research “blitzes” on mission trips that would allow him to gather large populations of patients and their families in a relatively short time period (i.e., the 1-2 week period of the surgical trip).

These data have been combined with additional data from sites in North America, Europe, and Latin America. The results have led to the identification of candidate genes for clefting and have expanded the definition of the cleft phenotype to include not only the obvious presence of cleft lip and/or palate but also more subtle physical findings, such as a sub epithelial cleft lip, which can only be detected with ultrasound, and olfactory deficits (References: 1-9).

Having traveled to Guatemala for more than a decade, Dr. Deleyiannis has also had the opportunity to assess the various surgical outcomes that one encounters on a typical surgical trip to a third world country.

In Guatemala the majority of cleft care has been provided by foreign doctors from North America and Europe. Techniques of surgical repair, experience with these techniques, and choice of technique can vary widely across the world. As a result, the surgical outcomes after cleft repair can vary.

In 2009 Dr Deleyiannis published the cases of a series of patients, detailing how these diverse deformities introduced from the first surgery can be subsequently corrected (reference: 10).

Today, Dr. Deleyiannis is focusing his clinical care in Guatemala on microtia patients (i.e., patients born without a fully-formed ear).

The repair of microtia typically involves a number of surgical stages in which 3- 4 of the patient’s ribs are carved into the shape of an ear and then this framework is covered and refined with additional surgery (Figures 1 and 2).

What makes these trips so unique is the extent of continuous follow-up that is available through the Moore Center.

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Although long-time colleagues, they are collaborating more closely these days.

One reason for their recent teamwork is the imminent closure of the Médecins Sans Frontières (MSF, a.k.a. Doctors Without Borders) temporary hospital in Léogâne, about 25 miles from the capitol of Port-au-Prince. The earthquake crisis is considered over and MSF has begun to reduce its activities in the hospital.

For instance, the hospital had been assisting 700-1,000 births per month, but is now handling complicated pregnancies only. MSF has offered completely free labor and delivery services to women in Haiti, which enticed many families to deliver at the hospital.

This is a great achievement that the Ministry of Health would very much like to maintain. However, with MSF’s departure, there is concern about how maternity care needs will be met, let alone at no cost to the patient. To this end, Blair Gifford has organized the construction of a maternity center, working alongside community members and the Ministry of Health, with funding from the U.S. State Department’s Fulbright Program and Global Health Connections (GHC), a Denver-based not-for-profit organization.

Aligned with the Ministry’s official position that all births should happen in a facility, the center will help to sustain the high numbers of facility-based births that have been attained in recent years.

However, it is not possible for the institutions still operating in Haiti to offer completely free deliveries. Although patients will be responsible for a small fee related to medications and lab work, stakeholders are hopeful that momentum surrounding facility-based delivery has been established.

Gifford recounted the story of the maternity center’s inception, “It started as a storefront clinic in Léogâne that was owned and operated by physicians Joseph and Rose-Marie Charles. At the time of the earthquake, the Charles’ offered a piece of their four and half acre plot to the Canadian MASH unit [Mobile Army Surgical Hospital].

“The MASH unit offered orthopedic care following the emergency. They wanted to pay for use of the land, but Dr. Charles declined to accept the payment. He felt that the Canadians shouldn’t have to pay for providing such wonderful service to the Léogâne community. Undeterred, the Canadians constructed a 20-bed wooden hospital for the Charles’ to practice. It is called CAMEJO Hospital. The maternity center, with a concrete foundation, is housed nearby on the Charles’ property.

“Building the maternity center was no small task. My students from the Business School at the University of Colorado Denver created plans and organized local engineers, contractors, and laborers to get the work done.

“The local business community was very supportive of this project. Denver’s own Project C.U.R.E. equipped the facility. The center was inaugurated August 1st, 2014, and will come into full service when the MSF hospital closes in early 2015. I believe it will be a cornerstone of health systems strengthening for this area.”

Blair Gifford, Ph.D., Professor of Global Health Management at the UCD Business School and Colorado School of Public Health

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Health systems capacity is a key consideration in this transitional period - the astronomical number of births that the MSF hospital facilitated will have to be dispersed among several smaller locations. Community health workers (CHWs) will be instrumental to this process.

Immediately following the earthquake, existing networks of CHWs were tasked with disseminating information about resources available through international NGOs present in the country. Now, they will be conduits of information about the closure of the MSF hospital, the alternative locations for safe birth, and the continued importance of delivering in a facility.

As the patient load of Léogâne is spread among the smaller facilities, it will be necessary to ensure that appropriately trained personnel are staffing these locations. Anticipating the need to increase personnel capacity, the maternity center will offer vocational midwifery training in the future.

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Midwives will likely operate both within maternity center and in the surrounding mountain villages, alongside other community health workers.

In addition to diverting pregnant women to new safe spaces for birth, midwifery outreach is essential to engaging women in prenatal care. Gretchen Berggren underscores the limited prenatal care seen in Léogâne and neighboring communities, “80% of women in Haiti get only 1-2 prenatal consultations which are almost always in the last trimester. Almost half of them are seriously anemic. Ideally, we would like 80% of women to have consultations in the first trimester.”

In the mountain villages of Haiti, Berggren has observed miniature antenatal clinics held to detect high-risk pregnancies. Polyvalent community health workers set up posts at schools or churches and perform basic assessments: taking blood pressure, measuring fundal height, and evaluating danger signs.

Creating referral systems for high-risk pregnancies is an important logistical challenge. While MSF continues to operate, the point of referral is simple, but soon the challenge will be allocating the women among the smaller facilities like the GHC Maternity Center at CAMEJO Hospital.

The preventive care offered through community outreach programs is a necessary extension of care happening in clinical settings.

Interestingly, traditional birth attendants (TBAs) have largely fallen out of favor with Haitian women, making the transition to a two-pronged approach (decentralized outreach and centralized facility-based care) very timely.

Dr. Berggren reports, “A chief complaint from women about traditional birth attendants is that they cost too much money. I sometimes hear, ‘We used to give the TBAs a chicken [for delivery services], we could pay them in-kind, but now they ask for money,’ 30% of women give birth without TBAs – they deliver with neighbors, aunts, uncles.”

Both Berggren and Gifford hope to seize on this opportunity to establish new pathways to care in the village communities, and the mini clinics offer great prospects for messaging about and referral to infrastructure developments in Léogâne.

Existing networks of CHWs, like Children’s Nutrition Program and the government-run Agents de Sante are integrating more maternity education into their processes. Generating supportive conversations about maternal care is essential to mitigating the gap that will be felt when the MSF hospital is shuttered.

Gifford states, “When MSF closes their doors in 2015, the maternity center will open. At the CAMEJO Hospital there are already a few midwives, a neonatologist, a few pediatricians, an OBGYN, and a surgeon on staff to provide maternity care.”
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The next step will be to provide vocational training in midwifery.” Midwives are significantly less expensive to train and maintain than doctors; they can be drawn from local populations and are more likely to be accepted and trusted by hard-to-reach rural communities.

Vocational training could provide opportunities for TBAs to repurpose their skills. It will enhance economic and community development, and offset high unemployment rates.

The departure of MSF in 2015 is daunting, but returning responsibilities to the Haitians is a shared goal for all. MSF helped to elucidate what services were needed most, and maternal care has emerged as a top priority.

Fortunately, Haitians have reopened almost all their hospitals, and the equipment donations from around the world are being put to good use. The hospitals are functioning as well or better than before the earthquake, and there is a greater recognition of the gaps in care that still need to be filled.

If there are any positives to come from the 2010 quake, the realization of more robust and sustainable healthcare, especially for mothers, is certainly among them.

To learn more about Dr. Berggren and Dr. Gifford’s work contact them as follows: gberggren@aol.com and blair.gifford@ucdenver.edu

♦ By Molly Terhune

Dr. Blair Gifford (second from left), MBA/Health students and CAMEJO hospital celebrate the completion of the GHC maternity center building.

YOU ARE INVITED TO JOIN US!

Robinson Durst International and Calvin L Wilson Future Leaders in Global Health Scholarship recipients have returned from their international travels and will be presenting their projects.

WHEN: Thursday, October 23, 2014
6:30 p.m. Reception,
7:00 p.m. Presentations Begin
WHERE: Durst Studio, 1571 S. Broadway, Denver
HOW: RSVP to Michelle Shiver at michelle.shiver@ucdenver.edu

♦ Kathryn Dovel (College of Liberal Arts and Sciences - Ph.D.) – Gender and the provision of HIV testing: Examining how models of care influence men’s use of testing services, Southern Malawi
♦ Karen Hampanda (College of Liberal Arts and Sciences - Ph.D.) – Gender, Power and Perinatal HIV, Urban Zambia
♦ Paul Kim (School of Medicine - M.D.) – Exclusive Breastfeeding Practices in the Kavra District of Nepal, Banepa Region of Nepal
The Moore Center not only has an established relationship with Children’s Hospital Colorado but also employs a Plastic Surgeon, Pediatric Surgeon, and Pediatricians who provide clinical care and follow-up after the international team has left Guatemala.

Dr. Deleyiannis is currently submitting an IRB for another research blitz during his upcoming 2015 mission to the Moore Center. If approved, he will take tissue samples from patients and their immediate family members to determine the genetic risk factors for microtia.

In discussing his work, Dr. Deleyiannis is committed to the idea that combining genetics research in surgical missions helps practitioners to better understand the risk of the population they are treating. What’s more, it helps practitioners worldwide to better understand the predisposing factors (i.e. dietary, hereditary etc.) impacting children. Finally, surgeons are better prepared to select the best surgical techniques and have the best surgical outcomes when equipped with this information.

For others interested in pursuing international service missions and research, Dr. Deleyiannis recommends obtaining a skill set that is more than just clinical medicine. Training in epidemiology, research design, and cultural awareness, especially what can be achieved through learning a second language, can increase one’s ability to expand their impact.

To learn more about Dr. Deleyiannis and his work contact him at Frederic.deleyiannis@childrenscolorado.org

References
Presentations:


“Geographic Distribution and Injury Severity of Penetrating Trauma in Cape Town, South Africa”

“Demonstrating the Effectiveness of an African Emergency First Aid Responder System”

“Development of a Comprehensive Protocol for the Diagnosis and Treatment of Non-communicable Diseases in Health Centers of Northern Viet Nam”

“Using GPS Satellites and Geocoding to Assess Surgical Needs in a Refugee Setting”

“Comparison of Two Registry Approaches in Detected Pre-Eclamptics; A Quality Improvement Project in Rural Southwest Guatemala”

“A Quality Improvement Evaluation of Nepalese Women with Prior Uterine Prolapse Surgery”

“Sub-Saharan Africa’s Limited Access to Electricity and the United Nations Sustainable Energy for All Initiative”

“Drinking Water Quality and Quantity in the Trifinio: A Pilot Study”

“Evaluation of the Oral Health Status of Elementary Age School Children Attending the Banasa School in Trifinio, Guatemala”

“Creciendo Sanos: An Early Childhood Health and Development Program in Southwest Guatemala”

“Extended Nevirapine Prophylaxis for HIV Exposed Infants Improves HIV Testing Uptake in Kenya”

“Exploring Intentions to Exclusive Breastfeeding in the Hills Region of Nepal: Piloting Survey and Methodology Designs”

“Feed the Future Innovation Lab for Collaborative Research on Adapting Livestock to Climate Change”

“Health Care Access and Malaria Severity in the Ngorongoro Conservation Area (NCA), Tanzania”

“Identifying Otolaryngology Systematic Review Research Gaps: Comparing Global Burden of Disease 2010 Results With Cochrane Database of Systematic Review Content”

Recipients of the 2014 Excellence in Global Health Award will be announced.

Final agenda to be posted soon; click here.
October 22, 2014
12 noon/ED2N 2106
Anschutz Medical Campus

Nee-Kofi Mould-Millman, M.D., Assistant Professor of Emergency Medicine, School of Medicine at the University of Colorado Anschutz

*Emergency Care in Sub-Saharan Africa—Innovations and Challenges*

November 5, 2014
12 noon/ED2N 2106
Anschutz Medical Campus

Daniel Nicklas, M.D., Assistant Professor of Pediatrics, School of Medicine at the University of Colorado Anschutz

*Caring for Somali Refugee Children*

December 3, 2014
12 noon/ED2N 2106
Anschutz Medical Campus

Lisa Abuogi, M.D., Assistant Professor of Pediatrics, School of Medicine at the University of Colorado Anschutz

*From Prevention to Elimination of Mother to Child Transmission of HIV: Is the End Really in Sight?*