



Poster Presentation
Participants and Award Recipients

The Art of Serving

2018 Humanitarian Health Conference

April 12 - 13, 2018
Kansas City, Missouri

Poster Presentations

Conference organizers welcomed participants to present posters of their completed and/or ongoing professional work during the 2018 Humanitarian Health Conference (April 12 - 13, 2018) in Kansas City, MO.

Poster Presentation Categories included:

- Global Health Education
- Research and Innovation

Special consideration was given to poster presentations that focused on the following topics:

- Impact of international rotations and experiences on learner development
- Impact of implementing public health services in communities with limited resources
- Clinical issues in resource-poor communities
- Sustainability implications for short-term international projects or partnerships
- Global impact of medical mission
- Innovative approaches in global health
- Global health research

INMED



INSTITUTE FOR
INTERNATIONAL
MEDICINE

INMED exists to equip healthcare professionals and students to serve the forgotten. We are a nonprofit educational organization that offers didactic instruction in international health, diseases of poverty, and community health development via online and in-classroom courses as well as conferences. We also offer supervised international service-learning experiences for healthcare students and professionals at over 45 training sites in 20 low-resource countries.

For more information, please visit inmed.us or contact us at:

INMED
2340 E. Meyer Blvd.
Building 1 Suite # 338
Kansas City, MO 64132

E-mail: office@inmed.us
Phone: 816-444-6400 ext. 1
Fax: 816-444-6400

Table of Contents

Award Recipients	Page 3
Clinic Vitals: Free App for Training Mission Trip Volunteers	Page 4
A Comparative Analysis of Factors Affecting Orthopedic Accessibility in Four Different Countries	Page 5
Increasing and improving utilization of local health promoters among remote regions of the Peruvian Amazon: an exploratory pilot study of an innovate program model	Page 6
South African Perspectives on Complementary and Alternative Medicine (CAM): A Field Study in Cape Town	Page 7
Mission Thyroidectomy	Page 8

Award Recipients

Global Health Education Award Winner:

Mission Thyroidectomy

by Charles Johnson

Research and Innovation Award Winner:

Increasing and improving utilization of local health promoters among remote regions of the Peruvian Amazon: an exploratory pilot study of an innovate program model

by Carolina Espindola-Camacho

Clinic Vitals: Free App for Training Mission Trip Volunteers

Landon Hester, Fiker Desalegn, Dylan Jarvis, Abby Lorentz, Kari Bandurian, Jennifer Gentry, Abby deSteiguer, Christian Reyes, Seth Bellamy, Seibrina Huckaby, Taylor Steele, Jeff McCormack

Clinic Vitals is a reference for techniques performed by volunteers at free clinics. Clinic Vitals exists for volunteers to accurately and efficiently learn about these skills. Each technique is demonstrated in a video that is reinforced by articles with screenshots from the video. New volunteers may be instructed to download Clinic Vitals in order to learn about basic skills before coming to volunteer for the first time.

Many pre-med and free clinic volunteers may have not had thorough training in regards to taking basic vitals. By providing this free app to non-profit clinics, we hope to better strengthen the knowledge and techniques of volunteers at these clinics. Our goal is to improve the accuracy of results, efficiency of operation, and safety.

The app has been designed so that you can send out a link to the app in emails to new volunteers and they can learn the techniques they will be performing before they come to clinic. We suggest copying and pasting the following statement into emails, with modification.

If you would like help setting up Clinic Vitals to be used by your clinic's volunteers don't hesitate to email landon.hester@eagles.oc.edu. If you have feedback or know of more topics that would be useful also don't hesitate to email.

A Comparative Analysis of Factors Affecting Orthopedic Accessibility in Four Different Countries

Sahaja Atluri¹

Of the 2582 cases presenting to the orthopedic emergency ward in Poursina Hospital (a referral center in northern Iran), a staggering 66.5% had fractures. The most common trauma these fractures resulted from, were falls. Even more eye-opening, was that most of these injuries came from rural areas. (Soleymanha M et al., 2014) This poses several questions, identifying risk factors and modifying existent prevention systems is the basis of any healthcare system; are our rural systems failing, why are our patients traveling this far to get that care, and what is this effect of this preventable acute orthopedic traumatic event on the patient's quality of life and lifespan? The issue lies in having a field of care such as orthopedics narrow to its patient population in urban areas, and areas with a high availability of resources, due to the pursuit of finding better procedures, better results, and better ways to treat the specific population. Combining the high need for orthopedic care with low access to such a specialty results in a poor prognosis for basic orthopedic injuries in rural areas internationally.

Studies show that this pattern is seen overall, all around the world, where injury-related hospitalizations are higher for patients living in rural areas, in fact, rates generally increased with increasing ruralness; these patients have a significantly higher risk of orthopedic injury. It can be noted that geographical area affects access to orthopedic services, with rural areas having less access despite them having more relatable injuries. Correlative studies of orthopedic accessibility indicated a positive correlation with the degree of urbanization while showing a negative correlation with area deprivation. In the 4 countries studied, the findings suggest that orthopedic medicine is needed for the underserved populations and populations in rural areas worldwide. The increased need for orthopedic care is the result of their high risk for acute traumatic injuries. Overall, two solutions can be presented: one being, surveying our rural areas to educate our population there on risk factors and prevention, while the other answer lies in reducing the oversupply of care, by shifting resources and orthopedic physicians from affluent urban areas to deprived rural areas. Rural areas internationally are significantly more deprived in third-world countries than economically-developed countries, educating our patients there serves to correct and modify failed prevention systems. Pursuing sophisticated measures of accessibility for our rural areas will have the potential to reduce costs, improving health care overall. Pushing for such a rural expansion would be a means to link back orthopedic medicine into international medicine, thus expanding the horizons of international medicine and serving a greater population in need of such care.

¹ Sahaja Atluri, University of Missouri–Kansas City School of Medicine, 1156 E. Beacon Hill Ln, Kansas City, MO 64108; Telephone (978) 727-3963; Email sa3p3@mail.umkc.edu

Increasing and improving utilization of local health promoters among remote regions of the Peruvian Amazon: an exploratory pilot study of an innovate program model

Carolina Espindola-Camacho; Daniel Ebbs D.O.; Starr Matsushita; Amanda Mika; Jeanette Lovato D.O.; Namritha Manoharan; Grace Kim; Ellen Liang; Joy Lewis D.O., Ph.D.; Julian Hirschbaum D.O.

Community health workers (CHWs) play integral roles in primary health care provision in low- and middle-income communities. This is especially true in underdeveloped areas where there is an acute shortage of any type of health provider. This study examines development and community utilization of the MGY CHW Training Program that incorporates Osteopathic Manipulative Treatment in its curriculum. The Community Health Workers in this study are part from the Loreto province of Peru. The community-oriented training model was designed to help augment community health resources in underserved and isolated areas.

The resource utilization in each community is studied through surveys administered prior and again one year following program implementation. From these surveys, all communities demonstrated significantly increased CHW utilization. The CHWs were used as their initial point of contact for immediate health concerns.

The community-focused, technology-oriented model was developed as an effective way to promote the use of CHWs in the Amazon region of Loreto and could prove valuable to CHW capacitation efforts within other underserved communities around the world.

Contact authors:

1 Carolina Espindola-Camacho, 1602 W Pierson St #331 Phoenix AZ 85015; 805-276-4632; cespindolacamacho@atsu.edu; A.T. Still University School of Osteopathic Medicine in Arizona
2 Julian Hirschbaum D.O.; jhirschbaum@atsu.edu; LAC+USC

South African Perspectives on Complementary and Alternative Medicine (CAM): A Field Study in Cape Town

Muhammed M. Alikhan¹

Complementary and Alternative Medicine (CAM) has usually played a distinctive role from conventional medicine; the latter is defined as the standard of practice in industrialized countries. However, pharmaceutical development has shown therapeutic benefits in an increasing number of naturally-derived compounds. Heading into a new era of the coexistence of these two forms of medicine, I hope to understand perceptions regarding CAM and its integration with conventional medicine with a South African lens.

In the context of an organized curriculum between 05/21/16 and 05/28/16 through the University of Missouri Kansas City, data were collected through guided conversation with four local leaders in healthcare delivery in Cape Town, South Africa, including one Xhosa tribal chief, along with site visits to three areas of relevance. Conversational topics were pre-determined and delivered in a standardized classroom-style setting. Site visits were also scheduled and conducted at the Kirstenbosch National Botanical Gardens, Tygerburg Hospital, and the University of Western Cape. Topics discussed include medicinal uses of native plants, integration of CAM and conventional medicine, and ongoing research in novel uses of natural compounds.

Findings are indicative of a widely prevalent culture of adopting CAM in South African culture. All four local leaders cite the long-standing history of CAM in the region, which predisposes much of the population to even be reluctant to pursue modern healthcare. For example, the Xhosa chief noted a well-established path to become a homeopathic healer in the tribe. Leaders at Tygerburg cited an integrative approach to offering care, combining a conventional and CAM approach in a manner unique to South Africa. To achieve this level of care, schools such as the University of Western Cape house a School of Medicine alongside a School of Natural Medicine, the latter of which offers a dedicated CAM curriculum besides conducting field research for development of new medicinal compounds. Kirstenbosch Gardens contained exhibits dedicated to medicinal plants with a deep history of reliance on these plants in South African culture.

It is apparent from both thematic conversational data with local leaders and site visits that CAM in South Africa has a rich, involved history and is widely prevalent. For these reasons, there is a generally positive attitude towards CAM. All data unanimously also suggests an existing culture for integration of CAM and conventional medicine that continues to be dynamic. There are implications of this work in the application of integration of CAM and conventional medicine beyond the borders of South Africa. Further studies are indicated to understand prevalence in urban versus rural settings and to correlate health outcomes with integrative care.

¹*Muhammed M. Alikhan, University of Missouri-Kansas City School of Medicine, 2411 Holmes Street, Kansas City, MO 64108; Telephone (815) 441-3528; Email mma6gc@mail.umkc.edu*

Mission Thyroidectomy

*Chris Johnson¹, Lisa Vaccaro¹, Timothy Morgan¹, David Stephen², DO, and Paul
Brisson, MD³*

¹3rd Year Medical Students, VCOM-Auburn, Auburn, AL

²Discipline Chair for Pathology and Histology, VCOM-Auburn, Auburn, AL

³Discipline Chair of Surgery, VCOM-Auburn, Auburn, AL

Introduction. Limited access to basic surgical care is endemic in developing countries.¹ Research has demonstrated that as much as 40% of the public health burden in underdeveloped countries is surgical in nature¹. American surgical teams have responded to this need in great numbers for many years. For example, Operation Giving Back (OGB), the volunteerism initiative of the American College of Surgeons (ACS), serves as a comprehensive resource center to find information on surgical volunteer opportunities and is affiliated with 29 surgical humanitarianism groups that conduct surgical mission trips throughout the year.²

Goiter, an abnormal enlargement of the thyroid gland due to iodine insufficiency, is a relatively common diagnosis in patients residing in countries served by mission surgical teams and mission hospitals⁴. Unfamiliarity with local resources could result in unexpected complications, including hypothyroidism, hypocalcemia, and wound problems. The scarcity of reports of complications related to humanitarian thyroidectomy suggests underreporting. We believe there may be a lack of professional guidance for the performance of a thyroidectomy in an austere humanitarian environment. Research has shown that surgical checklists decrease rates of morbidity and mortality from surgeries,^{16,17} and we believe that a Mission Thyroidectomy Patient Safety Checklist would be a valuable tool for a humanitarian surgical team.

Methods. We created a checklist of thirty supplies and experiences commonly considered necessary for the safe performance of a thyroidectomy for goiter. We then surveyed 28 surgeons with thyroid surgery experience in US hospitals and austere environments. For each item, the surgeons could choose: essential, not-essential but lack of item could impact patient outcome, or not necessary.

Results. Of thirty items on the Mission Thyroidectomy Patient Safety Checklist, there were fourteen items that the majority of surgeons felt were essential for the safe performance of thyroidectomy in a humanitarian or austere environment and another four items that the surgeons felt were not absolutely essential but lack of could impact the patient's outcome.

Conclusions. Humanitarian surgical teams working in an austere environment will likely encounter patients in need of thyroidectomy for endemic goiter.⁵ Performing a thyroidectomy in a setting of limited resources or unknown resources may be a new and challenging experience for some humanitarian surgical teams. Checklists in medicine and surgery has been shown to markedly improve patient safety. We believe that our Mission Thyroidectomy Patient Safety Checklist can serve as a valuable guide for the humanitarian surgical teams operating in an austere environment by providing a comprehensive list of items that are critical to the safe performance of thyroidectomy for goiter. We also believe that our checklist will assist humanitarian team medical directors in choosing the appropriate patients for this challenging surgical procedure.

Acknowledgments.

Ian McLeod, MD, Memorial University Medical Center, Savannah, GA

Mark Zafereo, MD, MD Anderson Cancer Center, Houston TX

Gregory Randolph, MD, Harvard Medical School, Boston, MA



Dates for the
2019 Humanitarian
Health Conference will be
posted at www.inmed.us

*Equipping Healthcare Professionals
and Students to Serve the Forgotten*