NEXUS

Physician Assistants for Global Health Monthly Newsletter

APRIL 2013

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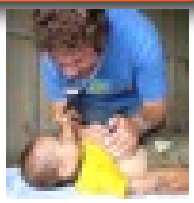
PAGH
Physician Assistants for Global Health
Local Hands, Global Reach

AAPA IMPACT 2013: See You There



Jacob Hauptman, PA-C

Over the last 3 months I have been traveling around SE Asia witnessing the medical need that is apparent in almost every country I've been through. Whether it is due to relatively recent wars, economic hardships, or natural disasters, there is a large gap between those who need care and those who receive it. Without a doubt, somewhere there is a PA who would be perfect to begin to bridge that gap and who wants to dedicate their skills to helping others.

At PAGH, our goal is to ensure that a PA such as that, one who dreams of providing medical aid to underserved areas around the world, has support from their colleagues as well as the ability to connect with other like-minded individuals. PAGH is constantly trying to create and improve forums where PAs and PA students can interact, brainstorm, and begin to achieve their goals. We do this through our website, our monthly newsletter, and through two important meetings a year, one at the AAPA annual conference, which is just around the corner, and the other at the annual PAGH Global Health Conference.

This year, as PAs and PA students descend on Washington, DC for AAPA IMPACT 2013, we need your help spreading the word about our two primary locations at the conference so we can continue to expand our network: our booth at the exhibition hall and at our official meeting on Sunday, May 26th. The exhibit hall booth is a great place for those PAs and PA students who have never heard of PAGH to have their questions answered and hopefully join our organization. We are still a small, completely volunteer-driven organization, and in order to achieve our mission we need to continue to grow. We will be in the exhibition hall **May 28th and May 29th, from 9am to 4pm**. Please consider dropping by to chat or bringing one of your colleagues to join!

Our second event, the PAGH meeting at AAPA IMPACT 2013, is a semi-annual meeting which gives the PAGH board a chance to meet with members face to face as well as present our goals for the upcoming year. It is also intended to provide that crucial forum for all of our current and new members to network and get closer to achieving their goal of becoming part of the solution to the global health need. We will have two speakers, Cathy Hoelzer, a PA with vast amounts of international experience, and Emily Pilachowski, a student on our board who just returned from a rotation in Northern Thailand. In addition there will be time for networking and interacting with other like-minded PAs.

We will have room for up to 70 members so please put us on your conference calendar and come see what you are a part of! The meeting will be on **Sunday, May 26th, from 5:30pm to 7:30 pm in Meeting Room 3 at the Renaissance Washington DC Downtown Hotel**. We hope to see you all there!

Sincerely,
Jacob Hauptman, PA-C, President
Physician Assistants for Global Health

Disease of the Month:
Clubfoot *(Talipes Equinovarus)*

Harmony Johnson MMS, PA-C

Clubfoot is a congenital anomaly that causes a malalignment of the talocalcaneal, talonavicular and calcaneocuboid joints. It's a combination of bony malalignment and soft tissue contractures. It results in the foot being inverted and adducted. The exact causes are not known. Scientific studies have found that familial inheritance, genetics and environment are all likely to be factors which interact to cause clubfoot but how this happens is not well understood.

Epidemiology

World Health Organization statistics estimate that 100,000 babies worldwide are born with a clubfoot. Other organizations have higher estimates. May be bilateral in up to 50% of cases. If both parents are normal with an affected child, risk of next child having clubfoot is 2-5%. If one affected parent and one affected child, then risk of next child having clubfoot is about 10-25%. It is more common in males than females. Left untreated, the condition causes severe lifelong disability. 80% of untreated clubfoot are found in developing countries.

Differential Diagnosis

Metatarsus Adductus; Poliomyelitis; Other neuromuscular disorders like: myotonic muscular dystrophy, arthrogryposis multiplex congenita, myelomeningocele club foot, progressive peroneal muscle atrophy and cerebral palsy.

Exam

One or both feet is inverted and adducted. Obtain a prenatal, perinatal, developmental and vaccine history. It is important to examine the child for other contractures/deformities to rule out a neuromuscular condition. You are looking for things like abnormal head shape or size, abnormal eye motion or discordination, joint contractures secondary to spastic muscles, hypotonic to spastic tone, growth delay, and persistent primitive reflexes.

Treatment

The gold standard in clubfoot treatment is conservative management with serial casting worldwide. The Ponseti method is a non-invasive, low-cost procedure to correct clubfoot with a high success rate. It consists of manually aligning the child's foot with the application of a series of casts. Many degrees of severity and rigidity of clubfoot are found at birth. Failures in treatment are related more often to faulty techniques of manipulation and application of the cast than to the severity of the deformity.

Casting begins in the first week of life in order to take advantage of the initial elasticity of contracted ligaments, joint capsules and tendons. The improvements from manipulation are maintained by immobilizing the foot in a plaster cast for five to seven days. The foot should be immobilized with the contracted ligaments at the maximum stretch obtained after each manipulation. Plaster casts applied between manipulations serve to keep the ligaments stretched, and to loosen them sufficiently to facilitate further stretching in the manipulations following at intervals of five to seven days. The tarsal joints and bones remodel due to the changes in the direction of mechanical loading of fast growing tissues.

Within the first 2-3 months, the surgeon attempts 5-6 manipulation and cast applications. Children who present for treatment after 4-5 months old may require operative correction because ligaments are more stiff. The total duration of treatment should be less than 3 months. 6 to 8 toe-to-groin plaster casts, changed weekly after manipulation and worn for 7-10 weeks, should be sufficient to obtain maximum correction possible. The essential components of Serial casting are:

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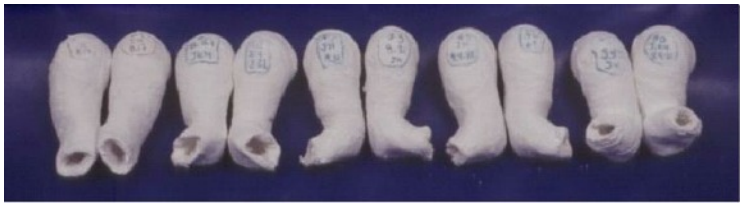
Correction of Cavus: Cavus deformity must be corrected prior to correcting the other deformities. The forefoot is supinated and the first metatarsal is dorsiflexed. The forefoot must never be pronated.

Correction of Adduction and Heel Varus: The goal is to abduct the supinated foot under the talus. The foot in supination is abducted while counterpressure is applied with the thumb against the head of the talus. The index finger of the same hand rests over the posterior surface of the lateral malleolus. The heel must not be touched. The calcaneus abducts by rotating and sliding under the talus. As the calcaneus abducts it simultaneously extends and everts, and thus the heel varus is corrected. The calcaneus cannot evert unless it is abducted. The improvement obtained by manipulation is maintained by immobilizing the foot in a plaster cast for 5-7 days. With immobilization, the tight medial and posterior tarsal ligaments tend to yield. The deformity can be gradually corrected with further manipulations and five or six changes of cast. To fully stretch the medial tarsal ligaments in the later casts, the foot in front of the talus must be severely abducted to an angle of about 60 degrees.
Cautions: Avoid forced external rotation of the foot to correct adduction while the calcaneus is in varus, this causes a posterior displacement of the lateral malleolus by externally rotating the talus in the ankle mortice. Avoid abducting the foot against pressure at the calcaneocuboid joint the abduction of the calcaneus is blocked, thereby interfering with correction of the heel varus.

Correction of Equinus: The foot is dorsiflexed and fully abducted. Dorsiflexion of ankle to > 10-15 degrees is rarely possible because of talar and calcaneal malformations and tight ligaments. Often a percutaneous tenotomy of the Achillis tendon is necessary to completely correct the equinus.
Cautions: Care should be taken not to cause a rocker-bottom deformity, which can occur when dorsiflexion of foot is attempted with pressure under metatarsals rather than under the mid-part of foot, particularly when varus deformity of heel has not been corrected. Do not to exert excessive upward force on metatarsals, because this can result in midfoot break (rocker-bottom deformity).



Other tips
The needed correction is lost while the foot is out of the cast. The cast should not be removed more than an hour before the new cast is applied.
The long leg casts are essential to prevent the ankle and talus from rotating. Since the foot must be held in abduction under the talus, the talus must not rotate; otherwise the correction obtained by manipulation is lost. Ponseti advocates for the use of shoes or molded orthotics attached to a bar in external rotation for 3 months full-time and at night for 2-4 years.

If serial casting is something you would like to be able to do – Contact Ponseti International about training, they even offer in country evaluation and training.

There are many clubfoot programs world wide committed to treatment of this deformity. Seek out the closest program to where you are practicing, learn the process for referral. A life of pain and deformity is relatively preventable. See Ponseti International, CURE Clubfoot, Global Clubfoot initiative. Also consult your local club foot organization/ pediatric orthopedist for surgical options which include circumferential release, “Cincinatti incision”, Goldner four quadrant approach: medial release posterior release posteromedial release, tendon transfers. Also for club foot deformities that have persisted later life, there are a handful of salvage procedures.

Resources

- WHO Congenital Anomalies Fact Sheet
- *www.wheelessonline.com/ortho/talipes_equinovarus_clubfoot*
- *www.ponseti.info*
- *www.emedicine.com*

Student Corner:
My Experience as a PA Student in Haiti

Interview with Josh Konoza, PA-S, by Emily Pilachoski, PA-S

Josh Konoza is a second year Physician Assistant student from the University of Pittsburgh's Physician Assistant Studies program. Before PA school, Josh served in Senegal for three months giving minor medical treatment and care to the country's large street children population, *les talibés*. Josh and his wife, Paige, decided to take mission trip to Pignon, Haiti for 16 days for their honeymoon in December during PA school. They went with the organization Many Hands for Haiti, MH4H.

What did you do to prepare for your trip and was it useful?

The most unfortunate thing about my trip was that it was a whirlwind. I finished the final exam of my didactic year on a Friday. My wife and I had to move out of our house on Saturday/Sunday. Then we had an 8 AM flight out of JFK on Monday. However, I feel like my didactic year was essentially the preparation for my trip. I looked at all the studying for exam week as not just a review for my schooling, but also my trip. I was lucky that the hospital's founder and long time leader Dr. Guy Theodore had studied in the U.S. when the role of the PA was being established. As such, he had an understanding of what skill set I brought with me, despite the fact that PAs are not yet a part of the typical Haitian medical staff.

Who was your most memorable patient and why?

I believe the most memorable patient wasn't even a true "patient", but a small boy who had been adopted at an orphanage that we spent time at during our stay. Mikey was a 5-year-old Haitian boy who suffered from hydrocephalus, severe mental retardation, and blindness. Mikey had been born with congenital tuberculosis. He would go on to develop meningitis from his TB that in turn would lead to his hydrocephalus. Adding to his list of problems, while he was a baby he was being treated for his TB with a multi-drug regiment that included Ethambutol. A nurse misread the dosage and gave him 10 times the dose he was supposed to receive, which led to irreversible blindness. Despite all of these obstacles, the couple that runs the orphanage gives him the best quality of life possible knowing that in Haiti, his diagnosis is terminal. My wife and I were lucky to get to spend time with Mikey for ourselves, as his personality was able to shine through past all of these conditions, rather than to just observe him from a more clinical perspective.

What common aspects of US healthcare were noticeably absent in Haiti?

One thing that I noticed as a whole was the lack of contact precautions. Pignon is much different than the rest of the country in that they have a large hospital in the town. This hospital was complete with two ORs, an endoscopy suite, general ward, and a prosthetic limb suite. During rounds one morning, a patient was suspected to have TB based on X-Ray and history/physical exam. Even while awaiting sputum culture, no one was even wearing masks. I would regularly see health care professionals not using gloves. It was explained to me later by one of the physicians at the hospital that if new gloves and masks were used with such frequency as in the US; the hospital would be out of funds by the end of the month.

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Another noticeable aspect of the hospital was that it was run on a generator for a limited number of hours each day that could be turned on outside of these hours in case of an emergency or unscheduled operation. I was told that the cost of running the generators every day from 8-5 hours would be $10,000. As such, it is another of the hospital's concerted efforts to allocate its funds as best as possible.

What did you learn abroad that you will use in your first job as a physician assistant?
I believe I learned to use more of my clinical skills of taking a complete history and performing a thorough physical examination while in Haiti. Too often I feel that we rely on expensive tests and labs to find answers to questions that our personal clinical skill sets can achieve on their own. That's not to say that diagnostic testing and lab results should not be used, but I realize in the future that I may not have access to those whether in the US or abroad.

How would you change your approach to your time in Haiti in order to make it a better learning opportunity?
Had I been able to have the time to prepare, I believe I would have learned more Kreyòl; the language that the majority of the Haitians speak. My wife and I studied some basics of Kreyòl, and I speak enough French to get by. As such, I expected that my language skills would suffice, with French being one of the "official languages" of the country. However, most of the older population spoke solely Kreyòl; while French was reserved for the upper class and young children attending school.

Do you have any other words of advice for students going on international rotations or trips?
First, the best advice I could give to students going abroad would be to learn about the culture and history of the country. Secondly, learn a few key phrases that are spoken locally. I'm not talking about the official languages of the country, but the local dialects/languages of the region you will be staying. This will go a long way and will open up more doors and opportunities for you. Lastly, I would say to soak everything in and remember you aren't in the US anymore. Things will be done differently and that includes the approach to medical roles.

Announcements

Welcome To Our New and Returning Fellow Members!
Andrew Oleson, Jonathan Brown, Christina Glenn.

Welcome To Our New and Returning Student Members!
Kevin Ferrell, Eduardo Garza, Arianne Krulish, Lane Erickson, Rachel Bonertz, Shelley Riegert, Michelle Gardner, Faith Hislop, Lauren Kelley, Jennifer Yarbrough, Robert Butturini, Anya Dvirnak, Brittany Krantz, Tessa Denzin, Colleen Galvin.

Student scholarship applications: Deadline is near!
For an application, please contact your Student Representative Emily Pilachowski (*epilachowski@gmail.com*). Due date is **April 14, 2013.**

2013 PAGH Global Health Symposium

Virginia Beach, VA the Sheraton Virginia Beach. Sept 28-29, 2013.
www.sheratonvirginiabeach.com

* Clinical CME for work in underserved areas topics may include: women's health/contraception, ethics, nutrition, HIV, Burn care in Africa, neglected tropical diseases and more!
* Network with global health PAs and organizations
* PAs in Global Health semi-annual meeting, update, and resource sharing session
* Questions or recommendations? Contact conference coordinator Harmony *harmoniouspa@gmail.com*

PAGH members $175. Non PAs/Non PAGH members $225 (includes PAGH membership)
PAGH Student members $100.
Non PAGH students $115 (includes PAGH membership). Single day $115. Single day student $60
Sheraton room rate $149 (must book by 08/27/13)
Nearest airport: Norfolk ORF

Global Health and Innovation Conference
Yale University in New Haven, Connecticut. April 13-14, 2013
Over 2,200 professionals and students from all 50 states and more than 55 countries will be attending this event, which is billed as the world's largest global health conference.
www.uniteforsight.org/conference

Helping Babies Breathe, Master Trainer Course
University of Colorado. May 9-10, 2013
www.helpingbabiesbreathe.org

Exploring Medical Missions Conference
Institute for International Medicine; Kansas City, Missouri. May 31-June 1, 2013
http://inmed.us/exploring_medical_missions_conference.asp

International Training Courses Available
Oregon Health and Sciences University; Portland, Oregon. Sept 12-Nov 22, 2013
www.ohsu.edu/xd/education/continuing-education/global-health-center/gh-education/ptgh.cfm

Announcements / Careers

PAGH Positions Open:

CME Chair (2 year position)
We are planning the 2013 PAGH Global Health Symposium, and it is a perfect opportunity to learn the ropes so you can then lead the planning for our 2014 PAGH Global Health Symposium.

Membership/Volunteer Chair
Help recruit future members and maintain our current membership. This position will also be in charge of coordinating any PAGH volunteers!

Research Committee
Help coordinate and execute research projects directly related to global health and the PA role. Please contact Lea Dunn for more information: *leamdunn@yahoo.com*

Clinical Associate Mentor, South Africa

American International Health Alliance, a government-funded non-profit that works in global health primarily in Sub-Saharan Africa, is actively recruiting **Clinical Associates Mentors** to serve in a 3-12 month placements in South Africa. Launched in 2008 by the South African Department of Health, Clinical Associates are similar to Physician Assistants and are dramatically increasing the number of mid-level medical professionals in the health workforce who are able to confront the country's immediate health needs.
The Volunteer Healthcare Corps began a South African Clinical Association Mentorship Program, providing US professionals (primarily physician assistants) with the opportunity to serve as mentors and clinical trainers of the students while they are in the district hospitals, often located in rural areas. This is an unique opportunity for highly skilled health professionals to directly apply their skills and expertise in a place that desperately needs it.
www.twinningagainstaids.org/documents/SouthAfricaCountrySnapshot07-09-12.pdf
Please contact Sara Adelman for more information about this post: *sadelman@aiha.com*

Positions Open in Afghanistan

Onsite OHS is looking for PAs to work in Afghanistan. Make a difference to EXPATS and Third Country Nationals in our clinics. Bring your boots and spirit of adventure! 12 month contract for up to $205,000 plus benefits. For more information please go to *www.onsiteohs.com* or contact *jessie.dyer@onsiteohs.com*

Ultrasound Courses Available

A link from our conference lecturer, Dr. von Tander to his NEJM article:
http://www.nejm.org/doi/full/10.1056/NEJMra0909487

Links gathered through Yale University:
http://yale-eus.com/Yale_Emergency_Ultrasound/Courses.html
www.sonoguide.com/ (free online seminars)
www.emergencyultrasound.com/course_calendar.php
www.sonosite.com - loans US machines for global health missions

Also check your local Emergency Medicine chapter, school or Global Health program (e.g: UCSD or Ohio Academy of Emergency Physicians):
www.ohacep.org/aws/OACEP/pt/sp/cme_ultrasound (no 2013 schedule yet)

Upcoming Medical Service Trips

Health Horizon International
www.hhidr.org
Dominican Republic:
May 4 – 11, 2013;
August 31 – September 7. 2013;
January 4 – 11, 2014.

Amazon Promise
www.amazonpromise.org
Villages of the Yarapa, lower Ucayali, and lower Maranon rivers:
May 11 - 25,
July 13 - Aug 3,
Sept 7 - 28, 2013.

Mountain Medics International
www.mountainmedics.org
Pisco, Peru, Earthquake Recovery: Ongoing
Cordillera Huayhuash, Peru:
August 3 - August 16, 2013

Flying Samaritans
www.flyingsamaritans.net
Frequent trips originating from California and Arizona to clinics throughout Baja California, Mexico

Peacework Medical Projects
www.peaceworkmedical.com
Ranquitte, Haiti: Summer 2013

Sea Mercy, Floating Health Care Clinic
www.seamercy.org
Tonga: June - August 2013

Volunteer Organizations

If you are aware of any trips or organizations that are looking for PA volunteers, please contact Olivia at *obockoff@gmail.com*. Please Note: it is not our desire to promote specific organizations only to connect PAs with opportunities and encourage professional philanthropy. This information is not an endorsement of these organizations.

Africa Cancer Care Inc - International opportunities with an oncology focus. *www.africacancercareinc.org*

Amazon Promise - Medical trips to portions of the Amazon Basin. *www.amazonpromise.org*

Benjamin Wellness Center - Opportunities in Gatamaiyu, Kenya. *www.benjaminwellness.org*

Christian Medical and Dental Assistance - *www.cmda.org*

Community Coalition For Haiti - need for medical professionals for 1-2 week trips to staff a primary clinic in Jacmel, Haiti. *www.cchaiti.org*

Exploration Logistics - Places PAs worldwide to serve as medical support for various expeditions. Positions include oil rigs and other industrial projects, etc. *www.elgfze.com*

FIMRC Global Health Volunteer Program: Opportunities in El Salvador, Nicaragua, Peru, Costa Rica, India, and Uganda. *www.fimrc.org*

Flying Doctors of America provides medical assistance and hope to as many of the poor and needy as they are able to reach. Medical & dental teams to wherever the current need is. *www.fdoamerica.org*

Flying Samaritans Mexico - year-round for Baja California, Mexico. *www.flyingsamaritans.net*

Goabroad.com - Assists different professions with placement internationally. *www.goabroad.com*

Grounds for Health - Uses PAs in Africa, Mexico, Peru, Nicaragua. *www. groundsforhealth.org*

Health Horizon International - *www.hhidr.org*

Health Volunteers Overseas - looking for volunteers to train and educate local health care providers around the world. *www.hvousa.org*

HealtheChildren - Ecuador, Haiti. Contact: jensorooni@gmail.com. *www.healthechildren.us*

Heart to Heart International - weekly trips to Hait and Guatemala. *www.hearttoheart.org*

Hospitals of Hope - Year-Round Clinic work opportunities in Bolivia, Haiti, and Liberia. *www.hospitalsofhope.org*

ICHA Outreach to fight Cardiovascular Disease - Opportunities in Ghana. *www.ichaonline.org*

Volunteer Organizations

International Medical Relief :Currently recruiting for a trip to Pakistan. Also trips to Asia, Africa, South & Central America, Eastern Europe. *www.internationalmedicalrelief.org*

Kenya Relief - *www.kenyarelief.org*

Lalmba - Lake Victoria in Kenya and in a rain-forest in Ethiopia. Goals are clinical medicine, coupled with public health, and working with local physicians. *www.lalmba.org*

Many Hands For Haiti - *www.mh4h.org*

Medical Missions Response - North Africa, Middle East, South/East Asia. *www.mmronline.org*

Mercy Ships - volunteer opportunities aboard "hospital ships". *www.mercyships.org*

Mountain Medics International - Cordillera Huayhuash, Peru. *www.mountainmedics.org*

Nunoa Project - two trips a year to Peru. *www.nunoaproject.org*

NYC Medics - deployment to disaster zones and humanitarian emergencies. *www.nycmedics.org*

Omni Med - work focused in Uganda. *www.omnimed.org*

Operation Smiles: providing surgeries around the world. *www.operationsmile.org*

Palmetto Medical Initiative - *www.palmettomedical.org*

Panama Global Connections - *www.panamaglobalconnections.com*

Peacework Medical Projects - *www.peaceworkmedical.com*

Physicians for Peace - work in Central/South America, Africa, Asia. *www.physiciansforpeace.org*

Project Hope - land based and ship-based care to regions around the world. *www.projecthope.org*

Rotations and Courses Internationally - *www.gorgas.dom.uab.edu* and *www.cugh.org*

The Carolina Honduras Health Foundation - Limón, Honduras. Active clinic, frequent need for medical volunteers. *www.carolinahonduras.org*

Timmy Global Health - looking for volunteers year-round. *www.timmyglobalhealth.org*

US Doctors For Africa - utilizes PAs for Africa work. *www.usdfa.org*

WellShare International - *www.wellshareinternational.org*

Help Nexus Improve! Your input can make a difference for future issues of Nexus. We welcome suggestions and submissions for future Book Reviews, Spotlights, or other features. And of course any and all comments are welcome. Contact *chad.eventide@gmail.com*