

## RADIOLOGY RESIDENCY GLOBAL HEALTH PATHWAY

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1. Formal elective in which residents and staff participate in health care delivery, optimally in a third world setting, with an emphasis on teaching the host providers image performance and interpretation ultrasound, radiography, and other modalities, as applicable. This travel portion of the pathway for senior radiology residents, and has included travel to Haiti, Ecuador, and Rwanda. Current planning is for GH program director (Rooney) and two senior residents (Patel, Caley) to travel to Tanzania in January/February, 2018.
2. Longitudinal support of imaging in Haiti, as a remote site, and coordinating through the Partners in Health (PIH) site in Haiti, coordinating through a remote server in Boston.
3. RAD-AID chapter, DHMC. The Rad AID conference is an annual opportunity in Washington DC to evaluate the state of global imaging and how academic radiology is being implemented in various international locales. Optimally, this conference is attended by staff and residents. For 2017, this conference will be attended by the GH director and two senior residents. There is also a follow-on round table discussion among the chapter sites.

### LIST OF COUNTRIES

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Ecuador, Haiti, Rwanda, Tanzania

### SUPERVISORS

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#### ***Course Supervisor and Coordinator:***

Timothy B. Rooney, M.D.

### ELECTIVE STRUCTURE

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This elective has 4 major areas of focus

#### ***1. PARTNERS IN HEALTH SUPPORT FOR HAITI INTERPRETATIONS***

### ***Elective Learning objectives***

- To develop knowledge of local diseases and their presentations in Haiti
- To learn communication skills with the local providers and the PIH system

### ***Assignments***

- Longitudinal weekly interpretation of studies, largely CT exams from Haiti via PIH. Min 1 per week per resident
- The residents undertaking the global health pathway are expected to take leadership of this service under the supervision of Dr. Rooney. Cases should be tracked on the Google spreadsheet and numbers reviewed weekly with Dr. Rooney.
- Present interesting cases from PIH in a case conference
- Interpret these cases on a regular basis.

## ***2. GLOBAL HEALTH ENVIROMENT, DISEASES AND TECHNOLOGICAL KNOWLEDGE***

### ***Elective Learning objectives***

- To develop knowledge of the local diseases and common presentations on low resource imaging systems (conventional radiography, ultrasound)
- To learn how the economic, social, and cultural environment impacts the availability and acceptance of medical imaging and population health
- To develop technical and interpretative skills in low resource usage of radiologic ultrasound, e.g. diagnosing pneumonia in pediatric population, making diagnosis of pericardial effusion, the FAST scan, etc.

### ***Assignments***

#### **Pre-trip**

- Read assigned radiology articles and texts.

#### **Post trip**

- Prepare a teaching conference back at DHMC on interesting cases or a didactic lecture on a clinical topic related to the global health experience.

### ***Evaluations***

- On-site Staff Evaluation: (Paper)
- Accompanying staff evaluation (MedHub)

- Evaluation (faculty and residents) of the post-trip conference at DHMC.

### **3. SYSTEMS/IMPLEMENTATION**

#### ***Learning Objectives***

- To acquire a basic understanding of physical environment issues relating to the feasibility of imaging: power supplies, ultrasound gel, cleaning and sterilization of equipment, radiation concerns to patients and providers, etc.
- To understand differences between hospital archival systems and hard-copy patient-owned images (traditional) and the challenges and opportunities in transforming low-resource imaging from the latter to the former

#### ***Assignments***

##### **Pre-trip**

- Identify resource needs from the host institution
- Gather imaging resources as to take from DHMC/regional clinics such as US gel, cassettes, biopsy needles, drainage catheters, etc.
- Read appropriate resources, as assigned.

##### **Post trip**

- Include systems challenges discussion in the departmental presentation and summary (below).

#### ***Evaluations***

- Evaluation of the departmental presentation.
- Post trip evaluation by accompanying staff

### **4. EDUCATION AND TRAINING**

#### ***Learning Objectives***

- To develop teaching skills to train local radiographers, radiology residents, sonographers, and physicians (radiologists or other) in performing and interpreting radiographic and ultrasound imaging +/- CT

#### ***Assignments***

##### **Pre-trip**

- Identify specific teaching needs through contact with travel site and develop one or more teaching resources to address it (e.g. to teach medical/paramedical personnel how to perform a FAST scan). This should be in a form that can be used by the local personnel after resident leaves.
- Collate and develop teaching resources to give anticipated 4-6 focused teaching sessions, topics to be determined by DHMC and on-site faculty (Tanzania, Kilimanjaro Christian Medical Center).

#### **During trip**

- Implement technologist/secondary provider/learner teaching sessions to improve their practical skills in acquiring images and image interpretation.
- Using the collated and developed resources, educate local providers in clinical imaging interpretations as requested.

#### **Post trip**

- Write a 2-3 page summary of the educational, cultural and systems challenges that you faced in this environment, the cultural and your recommendations/suggestions for future residents.

#### ***Evaluations***

- On-site Staff Evaluation: (Paper)
- Accompanying staff evaluation (MedHub)

### **OTHER ASSIGNMENTS RELATED TO TRAVEL TO A DEVELOPING COUNTRY**

These need to be completed at least 3 months before travel.

- Ensure your passport is up to date (some countries will deny entry if a passport expires within 6 months of planned exit from country).
- Apply for VISA as necessary (Tanzania).
- Work with the DH/Other US faculty on site to coordinate time, travel, funding and accommodation as well as the onsite needs described above
- Contact occupational health and complete the pre-travel questionnaire, make an appointment for screening, possible prophylaxis, and vaccinations. Coordinate travel plans with the accompanying faculty member(s). Book travel thru Karen Ness, Radiology.

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## READING LIST

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<https://drive.google.com/open?id=0BwHzupqno4wWd0NxVFotdUVWU00>