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A Step-by-Step Guide to Creating an Elective Rotation Abroad for Radiology Residents

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INTRODUCTION

Many physicians take part in some sort of international volunteer work or outreach during their medical training. However, the number of physicians involved in such work appears to decline significantly upon entering residency. This is particularly true in radiology, a field where the role in global health is not always recognized. In 2011, it has been reported that less than 10% of surveyed radiology residents had developing-world opportunities at their residency programs, the lowest of the surveyed specialties. In contrast, 60% of radiology residents said they were likely/very likely to participate in such programs if offered (Wood et al, JACR 2014).

With the change in American Board of Radiology exam schedule and resultant increased flexibility during the fourth year of radiology training, the demand for international rotations is growing. Accordingly, the Accreditation Council for Graduate Medical Education (ACGME) published the Guidelines for International Rotations in Diagnostic Radiology in 2014.

Here we attempt to provide a basic step-by-step guide for residencies interested in starting their own elective rotation abroad for radiology residents. This is neither comprehensive nor one-size-fits all. Each residency program and hospital has its own regulations and policies, which will need to be addressed on an individual basis. Additionally, there are many academic hospitals with incredibly robust, multi-disciplinary global health programs. This is also not meant to serve as instructions on how to create a full global health program or curriculum – an accomplishment that is far beyond the reach of this guide. We simply hope that this will help residencies get a head start on creating their individual electives by bringing up some of the issues one may face and suggest some possible solutions and resources.

In concordance with the goals of RAD-AID International, we believe that creating an elective rotation abroad can serve as a strong foundation for a relationship with an international site. Educational collaboration can serve as a basis to build trust, understanding, and individual relationships that can expand into other realms including infrastructure development and research.

STEP 1: FIND ALLIES

Speak with your fellow residents and attendings to find those with a similar interest in global health and service. Together discuss the goals you would like to accomplish and make sure an international rotation is in alignment with these goals. Even if you only find one other person with a similar passion, you can support and motivate each other as well as brainstorm ideas, troubleshoot, and use your individual experiences and connections to increase your chances of success.

STEP 2: ESTABLISH MENTORSHIP & CHOOSE A SITE

While you may have goals in mind, accomplishing them will be much easier if you have people with more experience on which you can rely.

An attending advisor is a crucial part of your team. This person will not only increase your credibility with administration but also can provide invaluable experience and connections.

When choosing a host site, remember that RAD-AID is a huge and diverse resource made up of a wide network of people. Not only can RAD-AID provide advice on how to proceed but it can also be a potential option for finding a host site.

Nevertheless, it is highly recommended that you reach out to your institution's global health department. It is likely that the medical school or other departments already have international rotations in place. This can open the door for radiology and ultimately lead to an extremely fruitful collaboration that strengthens all involved departments. Nevertheless, in any situation, it is vital to be politically sensitive and avoid the false assumption that the host site will welcome your presence. Does the desire host site see the value you bring to their institution? Be sure you can state your value. If they don't see your value: Why? Explore barriers and see if they can be addressed.

On a related note, one should keep in mind how visiting residents can benefit the host site when choosing a location and planning the curriculum. This cannot be overemphasized. It may be best to restrict participation to senior level residents who can bring the strongest knowledge base. For example, senior residents can give introductory didactic lectures on topics like advanced imaging modalities such as MRI, which may be new or emerging at the visiting institution. Of course, touch base with your host institution to find out what lecture topics they would find most useful.

Additionally, we recommend choosing a site with a radiology residency in place if possible, particularly if this is the first international elective at your institution. This

provides a natural means for host site supervision of participating residents and basis for an educational collaboration. If no radiology residency exists due to limited resources at the desired site, find a means to have U.S.-based supervision from your home institution's attendings. For example, you can photograph the x-ray/CT images and email them home to the supervising attending if there is no suitable computer system in place.

Finally, remember to work closely with and establish the support of your program director and chairman from the start. You do not want to proceed without their initial support and it will subsequently make it a much smoother transition when you ultimately approach them for official approval.

STEP 3: CREATE A CURRICULUM

While this may seem daunting at first, a basic curriculum can be as simple as two to three pages long. An international elective ultimately requires all the basic elements of a typical rotation. Firstly, it must outline the primary goals of the rotation and give a background of the host site including background of the hospital, residency program, local supervision, and daily activities of rotating residents. The curriculum should include the skills required for rotation residents as well as the skills residents are expected to gain during their participation. It is most effective if these are organized according to the ACGME milestones to insure you are meeting each objective. Finally, there must be a means evaluation, both of the resident by a supervising attending and of the elective by the resident. These can simply be paper forms filled out accordingly. Below are important resources to review prior to creating your curriculum as well as a basic template for a curriculum to be adjusted to fit your own elective.

IMPORTANT RESOURCES TO REVIEW BEFORE CREATING YOUR CURRICULUM

- Your own institution's away elective requirements
- ACGME Guidelines for International Rotations in Diagnostic Radiology
- Wood MF, Lugren MP, Cinelli CM, et al. Global health imaging curriculum in radiology residency programs: the fundamentals. *J Am Coll Radiol.* 2014 Oct;11(10):968-73.
- Radiology in Global Health: Strategies, Implementation, and Applications (1st Ed). Mollura and Lungren. Publisher: Springer; 2014 edition (August 28, 2014)

TEMPLATE FOR A CURRICULUM

Primary goals of this International Radiology Rotation are:

1. Gain a perspective on global radiology as a vital aspect of public health and prepare residents for lifelong involvement in global health
2. Increase interpretative skills in basic radiology modalities and gain a better understanding of cost-conscious care
3. Build medical knowledge through exposure to a variety of infectious, oncologic, gastrointestinal and other diseases seen more frequently or with different presentations in less industrialized countries
4. Acquire experiential knowledge about the provision of radiologic care in a low-income environment and demonstrate a logical and appropriate clinical approach to the care of patients, utilizing local resources to recognize that lessons learned during the 2-4-week rotation can be integrated into practice when the resident returns to the US

Background of X Hospital in City, Country

Paragraph one: Describe the type of hospital (public or private, University affiliation, tertiary care, size, patient load, etc.)

Paragraph two: Describe the Radiology Department (number of attendings, format of the radiology residency if present, number of residents, equipment)

Paragraph three: Describe the diversity of pathology and types of cases residents will see.

Paragraph four: Describe the direct on site supervision and any prior experience the hospital has hosting foreign residents if applicable.

The daily activities of rotating residents would include: *Find out the daily activities of the institution you wish to visit and how the resident can engage as a visitor. For example, attending didactic conferences, participating in read outs, hands on ultrasound experience, giving invited didactics lectures, etc.*

Patient Care:

1. This radiology rotation offers a cross-cultural experience in caring for a population that tends to be younger, more indigent and present later than the US population.
2. Knowledge base should include the essentials of both inpatient and outpatient diagnosis and work up of all major radiology problems in its broadest sense with a focus on ultrasound and plain films. There will be an emphasis on infectious

diseases (such as TB, HIV, and tropical diseases), trauma and late presentation of common malignancies.

3. The resident is requested to take advantage of opportunities to learn from the radiology staff and clinicians in pediatrics, internal medicine and surgical specialties via consultation and interactions during conferences.

Medical Knowledge and Technical Skills:

1. Knowledge should include the ability to work through diagnostic pathways in a resource-challenged system. As such, the PGY-4 or PGY-5 will be required to have basic skills in plain film and sonography prior to participating in this rotation. Additionally, the resident will have the opportunity to improve ultrasound skills via hands on experience.
2. Build medical knowledge through exposure to a variety of infectious, oncologic, gastrointestinal and other diseases seen more frequently or with different presentations in less industrialized countries.
3. Resident will observe and, when appropriate or if invited, participate in discussions about various options regarding the radiologic diagnostic work up of patients.

Professionalism:

1. Culturally sensitive care and support should be provided to the patients and families with respect shown to all the hospital staff.
2. The resident will be an observer-learner and will participate by invitation in the clinical and educational activities. The resident should motivate and teach the junior house officers by example and interaction, attend all conferences, and be willing to teach or present if asked.
3. The resident is a guest of the outside abroad hospital and is expected to abide by all codes of dress and conduct.

Interpersonal and Communication Skills:

1. A constant attitude of respect for every staff member and patient and patient family member is imperative. Developing rapport and gaining the confidence of the faculty, staff, and resident-colleagues as well as the patient and family members is vital and accomplishing these through the barriers of language and culture may be challenging but is possible. All communication and interpersonal relations should be guided by principles of cultural sensitivity and appropriateness. Understanding that communications in any cross-cultural situation may require a thoughtful approach, the resident is expected to make every effort to speak clearly and ask follow-up questions to be certain communications is taking place.

Practice-based Learning and Improvement:

1. Self-reflection is a vital aspect of this rotation as the resident works in an environment very different from the medical environment of a US academic medical center.
2. The resident is encouraged to keep a journal to record impressions, observations, and lessons learned from this experience. The resident is encouraged to appreciate, learn from, and hopefully incorporate some of the interpersonal and radiologic practices observed abroad into the resident's relationships and practice on the return to the US.

Systems-based Practice:

1. Appreciates the issues raised by resource-challenged diagnoses in the out-patient and in-patient setting in a tertiary-care facility that may be many hours or even days distant from the patient's home or support system.
2. Learns how the most accessible facility in a low-income country is asked to handle every type of medical disease or emergency regardless of its capabilities or resources and the challenges of referral.

STEP 4: GET SUPPORT AND FUNDING

Once you have GME-approval, the next step is getting official support from your chairman, program director, and educational committee. This is largely about making sure you are organized and have done your homework. Prior to presenting a proposal to your educational committee, make sure you are well prepared for any questions.

Because the answers to many of these questions are site and institution specific, we have simply provided a list of important things to consider prior to presenting your proposal. In some instances, we have provided information on how our institution handled a situation. Of note, in our case, we compiled the below information into a large packet of "information and forms" that now serves as the pre-trip guide for all residents participating on the elective.

Of note, try to be cognizant of your institution's cost limitations. Your program may support you on an educational basis but may not be able to provide financial support. In this common scenario, other fundraising options will need to be explored.

- I. The Components of the Elective
 - a. Eligible residents and length of the rotation
 - b. Daily activities and role
 - c. Requirements of the resident (for example, required lecture while on site and required lecture to residents upon returning)

- d. Evaluation forms
- II. The Site and Safety
 - a. Logistics (flight costs, accommodations and cost, walking distances, visas)
 - b. Safety (crime, political stability, state department warnings)
 - c. Emergency situations (With the help of our risk management office, we were able to arrange for residents to obtain their own affordable emergency evacuation services from United Healthcare through a pre-established relationship with our medical school)
 - d. Residents should provide emergency contact and itinerary prior to departing
- III. Liability
 - a. It is highly recommended that you speak with risk management. They can provide you with required agreement and release forms, consent forms, and whatever else is required by your institution.
- IV. Medical malpractice insurance
 - a. At our institution, once an elective is GME-approved, residents are covered by the medical malpractice insurance already obtained via the residency program. Check with your GME office to confirm that this is the case at your institution.
- V. Demonstrate the benefits to the radiology residency and beyond. For example:
 - a. Develops medical knowledge & technical skills
 - b. Creates new learning opportunities for other residents who do not go abroad via lectures and shared cases
 - c. Provides unique exposure
 - d. Attracts new residents
 - e. Provides opportunity to apply for the ACR Foundation Goldberg-Reeder Resident Travel Grant
 - f. Creates new opportunities for potential posters, publications about experience abroad, research, etc.
 - g. Perhaps, most importantly. Creates a vital pathway to create future leaders in helping to serve areas of need in developing nations throughout their career.

For more information on creating global health radiology electives and volunteer outreach experiences, please contact RAD-AID at info@rad-aid.org