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International Clinical Rotations during U.S. Residency Training: Creating an Accreditation Council for Graduate Medical Education-Approved Rotation

Jeffrey S Berger[1]*, Deborah Jeon[1], Eric P Chiang[2], Daniel Asay[1] and Huda M Ayas[3]

[1]*Department of Anesthesiology and Critical Care Medicine, The George Washington University School of Medicine and Health Sciences, Washington, DC, USA*
[2]*Department of Anesthesiology, Star Anesthesia, San Antonio, TX, USA*
[3]*International Medicine Programs, The George Washington University School of Medicine and Health Sciences, Washington, DC, USA*

Abstract

Healthcare professionals increasingly report interest in global health and participation in international healthcare delivery. Growth opportunities exist for trainees to improve knowledge, skills and attitudes through international experiences. Professional development via international medicine may have lasting effects on patient care and practice patterns following training.

In 2010, the first resident took part in an international, exchange elective between The George Washington University's Department of Anesthesiology in Washington, DC and La Universidad de San Francisco's Department of Anesthesiology in Quito, Ecuador. This resident elective rotation resulted from a strategic partnership, initiated in 2008, between two training institutions with an established track record of medical student educational exchange programs.

The goal of any resident elective rotation should be to enhance an educational experience, to improve upon a perceived training deficiency, or to create a unique offering that takes advantage of local assets and connections. International electives, if properly conceived, can accomplish all three goals. This guide for program leadership addresses the rationale and challenges, from concept to Accreditation Council for Graduate Medical Education approval, of creating an international clinical rotation for residents.

Keywords: International healthcare; International elective; International rotation; Global health; International education; Residency training; Resident education; Elective rotation

Introduction

During medical school, a significant number of students study global health and participate in international healthcare delivery. Nationally, the number of medical students participating in some form of international elective has increased from 6% in 1984 to 20% in 2007 [1]. We infer that students who study global health and plan to incorporate international work in medical careers, or pursue lifetime global health careers, are interested in bridging the gap with an international medicine experience during residency training. In a survey of Duke University's Internal Medicine Residents, 42% reported the International Health Program as a significant factor in their residency selection [2]. Another survey of 724 surgery residents nationally found that 92% of respondents were interested in an international elective [3]. Hence, recruitment of top medical students may depend on the ability to offer international electives during residency training.

The specialty of anesthesiology, no different from other medical specialties, suffers from: (1) technology overload to the detriment of basic, physical examination skills; and (2) brief, intense patient interactions that often require exquisite cultural sensitivity. Accordingly, an experience in global health may focus on these deficits in U.S. training in order to strengthen skills and sensitivities. An evaluation of 162 multi-disciplinary residents from the Mayo Clinic's residency programs demonstrated that international electives diversify the residency experience with exposure to: limited-resource management; cultural, language and socioeconomic differences; unique patient populations; and rare disease and surgical management strategies [4]. Several literature review articles have concluded that international experiences during training may lead to improved knowledge (rare illnesses), skills (physical examination) and attitudes (cultural awareness) [5,6]. Additionally, decisions to practice in rural, underserved, or multicultural communities, to obtain public health training, and to defer subspecialty training in favor of generalist practice may result from international experiences during residency [7,8].

In 2008, the potential benefits of an international rotation were recognized, and provided the framework for the authors' efforts to create a 5-week elective rotation in Quito, Ecuador. Significant obstacles threatened to derail efforts to pursue the elective, such as fears of Accreditation Council for Graduate Medical Education (ACGME) denial of rotation credit towards training requirements, funding concerns, safety risks in developing nations, and scheduling challenges. The following paper guides readers through the process of establishing an ACGME-approved international elective rotation.

Identify a Champion

Creating an international elective usually begins with a motivated individual who investigates, develops, and cultivates the experience

***Corresponding author:** Jeffrey S Berger, Department of Anesthesiology, George Washington University Hospital, 2300 Eye Street, Suite 718, Washington, D.C. 20037, USA, Tel: 202-994-3737; E-mail: jberger@mfa.gwu.edu

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with an international partner. The champion typically boasts a local track record of successful leadership, prior international experience and contacts, and is passionate about the initiative.

Identify local partners

Garner institutional support for administrative and financial backing. To begin, the department, including chair and program director, must be supportive since the rotation will require off-site residents, faculty support, and potential funding. The Office of Graduate Medical Education (GME) should be involved in the planning of this rotation from an administrative standpoint to coordinate institutional agreements. An institutional Office of International Studies should be consulted; or, a medical school's Office of International Medicine Programs (IMP) can be an outstanding resource as well, especially with regard to planning, identifying malpractice coverage and obtaining information about foreign travel precautions. Hospital leadership should be informed, particularly if planning an exchange.

Identify international partner

Start with what you know! If there is a faculty member within the department who hails from an international locale, inquire regarding interest and resources. IMP may have a list of hospitals in international cities with long-standing institutional agreements for medical student rotations. Consider "ABROAD" when determining a potential partner (Table 1): 1. Access-Proximity correlates with affordability. This is particularly important if you have not identified external funding. 2. Basic safety-Resident well-being is paramount to any successful international elective. Instability frequently defines the leadership of international partners; flexibility must be maintained and regular site-visits are recommended. 3. Relationship-Choose a hospital for which you have identified a champion on your staff with the language fluency to coordinate the experience. 4. Overall population-Consider a hospital that may expose residents to differing patient demographics and pathologies. 5. Ailments-Evaluate weaknesses in the local case offering and partner with a hospital that offers significant volume in weakness areas. 6. Dialect/language-Ideally, trainees should be language competent. If not, consider English, Spanish or institutions with readily available translator services.

Strategic Planning

A champion-led field expedition to the international locale formally establishes the relationship with international experts, uncovers synergistic opportunities, and documents the experience to foster support from the U.S. institution (Table 1). Pre-trip planning should include formal meetings with key faculty and administrators at the departmental, hospital, and institutional levels. Establishing a connection with members of the host community may provide valuable insight to identifying local priorities as well as the specific benefits the international elective may provide to the participant and host site [9].

Based on site-visit reports, create a proposal for ACGME approval of the international elective (Table 1). Include a discussion of: logistics, feasibility (ie. Strengths, Opportunities, Weaknesses and Threats, or SWOT analysis), and costs; key faculty direction and supervision; rotation goals and objectives; institutional letters of agreement; and registration, assessment and evaluation forms.

Goals and objectives should be competency-based, incorporate relevant milestones, and highlight unique practice opportunities. Discuss limited-resource practice, cultural, language, community, ethics, and socioeconomic features that make the experience distinct. Include selection requirements, pre-departure training, post-rotation presentations, and participant scholarship aims.

The letter of agreement is the most complex and time-consuming aspect of setting up an international rotation. IMP, GME, hospital, legal, financial and accounting offices at both institutions must sign-off. The complexity of this document emphasizes the value of partnering with an international program that possesses an existing, institutional-level relationship.

Financial Considerations

Hospitals directly receive Medicare reimbursements for residents, complicating efforts to send residents to non-U.S. hospitals. Accordingly, hospitals should be included in planning and financial discussions. In the absence of hospital funding, department, medical school, national societies, or external grants and scholarships should be strongly considered.

Fundraising efforts can focus on directed donations for international experiences, such as alumni contributions to a global health endowment, or industry sponsored fellowships that support travels abroad [10]. We have found fundraising efforts for international residency experiences to be time-consuming, but worthwhile. Additional viable options include self-funding or partial funding for time-limited rotations.

Common costs for training at a non-U.S. hospital include: airfare, housing, food, travel insurance, and malpractice insurance (Table 2). Both U.S. and host sites have overhead costs to credential participants

Time	Events
0	Meet with local experts at host institution
1 month	Select several international partner institutions to contact
3 months	Determine final choice for partner institution based on ABROAD** considerations
5 months	Send champion from home institution to international location to explore opportunity
6 to 12 months	Create proposal, goals and objectives, and letter of agreement
13 months	Obtain GME approval for rotation
14 months	Submit rotation request to ACGME***
20 to 22 months	Receive response from ACGME
24 months	Begin to solicit applications from residents and funding support; work on securing housing options for participants
26 to 30 months	First resident begins exchange at international program

* Note: Only valid for U.S.-based training programs

**ABROAD: A: Access; B: Basic Safety; R: Relationship; O: Overall Population; A: Ailments; D: Dialect/language

***ACGME: Accreditation Council for Graduate Medical Education

Table 1: Timeline of Events*.

Obstacle	Considerations
Administration	Is there sufficient administrative support to coordinate agreements between the two institutions? Who are the key contacts?
Supervision	Will there be appropriate international rotation resident supervision to meet ACGME* qualification requirements for rotation directors? If not, is there a U.S. faculty champion who will travel with resident rotators for supervision?
Safety	Disease risks, vaccination and prophylaxis needs, security, government stability, views toward US citizens, etc. have been considered and the resident has been educated regarding safety?
Credit	How will the department schedule the rotation: credited elective time, or non-credited leave time? If credited as an elective, is ACGME approval required? What are the requirements of your specialty board for graduation? If attempting elective credit without formal ACGME approval, are individual petitions for international rotators required for ACGME or specialty board?
Funding	What are average travel and in-country living expenses, and how will they be covered? Who will fund the resident's salary while on rotation? Who will provide travel insurance? Will the host institution cover resident malpractice insurance?

*ACGME: Accreditation Council for Graduate Medical Education

Table 2: Obstacles to be Mindful of during Rotation Planning.

and create agreements; additionally, supervisory faculty at both sites must coordinate supervision, educational efforts, assessment and evaluation of trainees. Sustainability may hinge upon funding to support the overhead and faculty commitment required [11].

Risks to Participant

Residents should be prepared for risks to safety, time away from family obligations, and ethical dilemmas [12]. Safety risks may include both medical risks and personal risks due to political unrest or crime. During pre-departure orientation, safety advice, immunizations, and provision for emergency evacuation should be provided (Table 2) [10]. Another risk to consider is the concern for lack of resident supervision; participants should be counseled in advance with clear goals regarding the ethical dilemma of minimal supervision in a low resource setting [9]. Residents will practice within their ability in low resource settings if they are clearly prepared and instructed regarding when to seek supervisory support [9,10,12].

Risks to Host Institution

Negative impacts on host institutions include medical tourism, resource drain, and dependency. Short trips are often focused on resident education and do not take into account the local effects and long term value to the host country [13]. In addition to the depletion of physical materials such as gloves, supervision of international medical trainees places a strain on supervising faculty and results in time away from their other clinical duties (Table 2) [14]. In order to mitigate these risks, consultation with local experts to understand needs and recognition of the true costs to the host institution are necessary [9]. While medical residents may alleviate short-term staffing shortages at the host site, this may potentiate an unhealthy dependency on the U.S. institution [14]. A possible solution to prevent short-term dependency and have a more sustainable impact was demonstrated by Qureshi et al. by placing senior residents internationally for year-long rotations [15], or rotating different residents monthly to cover an entire calendar year. However, ACGME accreditation of U.S. programs will not likely approve extended placements, costs may be prohibitive with more ambitious programs, and U.S. trainees may compromise indigenous medical efforts [15].

Benefits to Participant

Lasting benefits after an international rotation include improved knowledge, skills, and attitudes. Improved knowledge of rare illnesses has been reported on numerous occasions post international rotation. While abroad, residents have increased exposure to medical issues uncommon in the United States, such as diseases not endemic to their home institution or advanced presentations of illnesses [4,7]. Residents also report improved physical examination and history taking skills, as well as increased cost-conscious medical practice [1,4,10]. Due to limited access to laboratory tests and diagnostic imaging, residents must decrease reliance on laboratory tests and improve upon history and physical examination skills. An added benefit of training in a resource-limited environment is increased confidence in clinical skills and decision-making [4]. Residents also develop sensitivity to cultural and socioeconomic factors, a deeper appreciation for public health issues, and are more likely to pursue primary care medicine, thus helping meet current needs in the US health system [7,10].

While methods of achieving educational competencies vary, Chase et al. report an overall improvement of participants' knowledge of tropical medicine [10]. By utilizing teaching as an alternate form of education, residents felt that they were contributing to their host institution and allowing a sustainable transfer of knowledge [4]. In order to accurately determine achievement of desired educational competencies, it is important to establish key outcomes to measure and methods of evaluation [10].

Benefits to Host Institution

Hosting medical trainees has positive implications for both the supervisor as well as the host institution, as indicated by a survey of host supervisors [14]. Some of the benefits include the exchange of ideas, professional recognition for the supervisor, opportunities for international collaboration, and improved reputation within the local community [14]. Issues of reciprocity and sustainability are commonly raised concerns with regard to international programs. Formalizing partnerships, providing host country faculty with adjunct appointments at the U.S. institution, and designing programs as an exchange to prevent the unidirectional flow of residents may address these concerns [10,14].

Taking these concerns into account, GW made efforts to strengthen the bilateral nature of our relationship with our partner site in Quito. The rotation was designed as an exchange, allowing residents from both institutions to participate. Participants reside, free of charge, with local residents during the rotation. Further, key international faculty at the host institution were appointed adjunct faculty at the U.S. program. Education and research requirements were initiated to ensure that the host institution benefitted from didactic and scholarship activity from rotating residents. Finally, GW residents began a used textbook donation program as a goodwill gesture to establish a medical library at the Quito hospital.

Conclusion

Interest in international electives continues to grow as more

medical students and faculty participate in international medical missions. Efforts to structure meaningful rotations face numerous hurdles; however, the potential benefits loom large. It is important to note that the timeline presented is valid only for U.S. based-training programs.

Two years after initiating efforts, the ACGME granted formal approval to begin a 5-week, international, anesthesiology elective rotation for GW residents in 2010 (Table 1). Subsequently, 3 GW residents and 1 Universidad de San Francisco resident have participated. The rotation has yielded 2 international presentations, 2 grand rounds presentations, 3 research posters, 1 manuscript, 2 newsletter articles, and a lifetime of memories. Too few residents have participated to speculate regarding long-term impacts of participation.

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