

Global Volunteerism in Radiology: Common Pitfalls

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According to recent research, more than a quarter of all graduating medical students acquire at least some international health experience before starting their residency. The survey also shows that many express a preference for programs that incorporate global health training.¹

In another recent survey, more than 84% of program directors received inquiries about working in radiology overseas.² In the past decade, moreover, RAD-AID International, the world's largest radiology nonprofit organization, has seen a fifty-fold increase in volunteering from the ranks of radiology students and trainees.³

While it is heartening to see this growing interest among radiology professionals in serving globally, it is also important to recognize that our desires can unintentionally undermine our effectiveness if we are not careful. This is particularly true with respect to donating used medical imaging equipment and putting our skills to work caring for patients in underserved com-

munities. Here are some thoughts to consider to help ensure that we “first, do no harm.”

Imaging Technology: Donate with Care

In high-income countries such as the United States, imaging equipment is continually being cycled out to make way for newer, faster, and better machines. It is understandable to want to donate this used technology to facilities and institutions in other nations. However, we must carefully plan, communicate, and partner with local stakeholders or else face the risk that otherwise perfectly good equipment will go underused or even entirely unused.

When donating, there are some types of equipment that should almost never be donated (MRI), some that should rarely be donated (digital X-ray or CT), and some that have a higher probability of success (ultrasound, mobile X-ray, or C-arm). The probability of success is highly dependent on infrastruc-

ture considerations. However, even with appropriate infrastructure, decommissioning, transportation, receiving, and installation are also all essential prerequisites for functional equipment arriving at the intended destination. Once installed, additional considerations include consistent power source or X-ray shielding. Technologists need to receive training in equipment use, maintenance, and quality control.

In addition, it is important to note that used technology usually does not come with service contracts. Indeed, the costs of such a contract can be prohibitive to the recipients,⁴ with the result that nearly 40% of medical equipment donations to low- and middle-income countries (LMICs) goes unused because of costs related to service contracts.⁵

Tellingly, a recent survey of members in LMICs by the RSNA's information management team found that 95% of respondents believe the disadvantages of donated equipment outweighed the financial savings of not having to purchase new equipment. They cited such challenges as missing parts, suboptimal site preparation, poor or no installation services limited staffing, and the

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absence of user manuals and/or appropriate training. In some cases, the imaging equipment may not be compliant with local or national regulations. For these and other reasons, many sites have stopped accepting donations altogether.⁶

It does not necessarily have to be this way. Guidance is available from the World Health Organization for donating medical equipment, and various non-government organizations and other charitable partners can help facilitate donations of imaging technology.

Voluntourism: Travel with Care

Just as it sounds, “voluntourism” refers to traveling at least in part to volunteer one’s services on behalf of charitable organizations and other groups. An estimated 10 million volunteers travel each year, spending over \$4 billion annually in the process.⁷ Voluntourism in medicine often takes the form of “short-term experiences in global health” (STEGH) and involves medical professionals from developed countries who travel to LMICs to provide care, teach, and/or conduct research. Data from the American Association of Medical Colleges suggests that more than 40% of medical students have participated in some type of STEGH.⁸

As with donations of radiologic equipment, there are potential issues to be aware of with respect to volunteering for STEGH opportunities. Many volunteers, for example, are either un- or undertrained and

lack sufficient oversight. In 2006, over a quarter of US and Canadian medical students had participated in an international elective, but more than three-quarters of Canadian medical schools did not require any predeparture training; nearly half of the students were permitted to arrange their own experiences without any faculty supervision. In cases like these, volunteers risk making misdiagnoses or rendering inappropriate treatment.^{9,10}

This issue also raises important clinical and ethical issues. For example, LMICs may be viewed as little more than practice grounds—places for trainees to acquire clinical skills. As a result, improper or substandard care may be delivered under the misguided rationale that “any care is better than no care.” Present in the community for only a couple of weeks, some volunteers may return home unaware of potentially adverse, delayed consequences such as incorrect diagnoses and poor patient outcomes.

In addition, an already overwhelmed local healthcare system may be saddled with further burden;¹¹ the circumstances that necessitated the intervention may remain; and shelter and hygiene may remain inadequate. In short, the STEGH team at best may serve as little more than an expensive band-aid to local healthcare problems that will continue to go largely unsolved.¹²

The good news is that we in healthcare can and are doing better. Global health interventions have

shifted toward developing long-term relationships and the engagement central to fostering community health self-sufficiency and success.

At the University of North Carolina, we have created a Global Health Leadership Pathway that runs through all four years of radiology residency. This pathway focuses on building relationships with partner organizations and local stakeholders. Many other programs around the country are establishing similar pathways. This longitudinal and collaborative approach is an important step toward making STEGH a more effective tool around the world.

Cultural Competency

Cultural competency in healthcare refers to a health system’s ability to care for patients with diverse values, beliefs, and behaviors, as well as different social, cultural, and linguistic needs. Our own default cultural lens may not account for these differences; consequently, our time, effort, and money may be wasted.¹³ In a recent survey, the most highly ranked predeparture competency cited by local stakeholders in LMICs was awareness of the influence of culture on patients and their health care. Indeed, this awareness was ranked more highly than language and communication proficiency.¹¹ Historically, travel preparation has centered mainly on health advice, vaccinations, and knowledge of endemic conditions. As this survey demonstrates,

however, cultural education is coming to the forefront of global health education.

Indeed, many medical schools, nonprofit agencies, and nongovernmental organizations now offer courses aimed at developing cultural competence. RAD-AID International, for example, offers culture-specific modules as part of its certification program in global radiology.

Moving Forward with Wide-ranging Impact

As medical imaging plays an increasingly central role in global healthcare delivery, moving forward thoughtfully and learning from historical successes and failures is important to our mission. Combined with collaboration and engagement with local stakeholders, our efforts can not only help communities abroad achieve healthcare sustainability, but also have an equally positive impact on us, our radiology trainees, and our practices.

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