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Ethics of Surgical Training in Developing Countries

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Abstract The practice of surgical trainees operating in developing countries is gaining interest in the medical community. Although there has been little analysis about the ethical impact of these electives, there has been some concerns raised over the possible exploitation of trainees and their patients. An ethical review of this practice shows that care needs to be taken to prevent harm. Inexperienced surgeons learning surgical skills in developing countries engender greater risk of violating basic ethical principles. Advanced surgical trainees who have already achieved surgical competence are best qualified to satisfy these ethical issues. All training programs need to develop a structured ethical review for international electives to protect their trainees and their patients from harm.

"If you are not confident doing the surgery safely, there will not be an opportunity for you in the OR." I was told this during my first week of a 9-week surgical elective at a busy hospital in Africa. My preceptor and I were discussing a patient with possible glaucoma in his only seeing eye. Without any possibility of appropriate follow-up, my preceptor wanted me to perform a trabeculectomy in his good eye to preserve his vision. I was nervous about performing the surgery, even though I was a fifth-year resident who had performed plenty of surgery in North America. In Africa, most of the surgical cases were difficult with advanced disease. In addition, the hospital staff was too busy to provide a long orientation. My preceptor was telling me that his hospital and Africa, in general, was not a place to learn to operate. If I did not already have sufficient skills to operate independently then I should not be in the operating room (OR).

The discussion with my preceptor highlighted for me some of the ethical issues surrounding surgical training in developing countries. What right did I have to operate on these patients? What was the ethical impact of practicing medicine in a foreign culture? Like many other traveling physicians, an international elective seemed like an excellent opportunity to see large volumes of advanced pathology, provide good surgical opportunities, and at the same time provide benefit to the local population. However, I learned that there was also a greater opportunity to cause harm. This article seeks to explore the ethical principles surrounding surgical trainees operating in poorer countries.

The practice of surgical trainees operating in developing countries is gaining interest in developed countries [1, 2]. Trainees are completing international electives at different stages of their training. Some are preclinical medical students, and others are licensed surgeons during their fellowship training. Hospitals that receive medical trainees have varying degrees of resources at their disposal to guide their foreign trainees. Some have rigorous acceptance protocol—including [the] curriculum vita (CV), references, prerequisite experience—and well structured curricula with graduated supervision. Other hospitals have minimal resources, expect trainees to practice independently, and

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depend on the trainees to help manage their heavy case load.

Trainees in foreign environments have ethical obligations to act in the best interests of their patients [3]. Wherever trainees are learning surgery, there is a concern about the impact on the quality of patient care. In developing countries, this concern is magnified, as there is often a greater ratio of patients to health resources. Many local surgeons are already overwhelmed with patients. As a result, trainees may lack adequate clinical supervision in developing countries.

The lack of health resources has been cited in the past as encouragement for students to go and operate in these underserved areas. The operative principle seems to be that some surgery, however expert, is better than none. Raja and Levin disagree and counter that the lack of available resources in a society makes a greater imperative for getting surgery done right the first time [3]. Poor surgical outcomes will burden the health system with increased iatrogenic morbidity. It is important for surgical trainees to provide services at an appropriate level or standard of care [4].

International institutions that accept trainees need to assess and develop surgical competence in their foreign trainees [5]. This should start at home, with training programs exposing trainees to surgical skills and decision-making prior to any elective experience. Often different techniques are used in developing countries, and these need to be taught to trainees with appropriate supervision. On site, trainees need mentoring to promote surgical competence in their new setting. An organized approach to trainee development would help to protect elective trainees from operating beyond their level of competence in an international elective [6].

There is a concern that international electives may foster a poor sense of professionalism, one of the six key competencies identified by ACGME [5, 7]. In developed countries, it is sometimes difficult for trainees to find adequate surgical experience. Often surgeons working in a competitive environment are unwilling to let beginning trainees learn to operate on their patients. International electives can be appealing both for the trainee and the residency program. It seems to provide [an] ample opportunity for residents to learn to operate. However, this practice may teach trainees that patients from other cultures can be used for surgical training, thereby reinforcing the undesirable view that some patients are more valuable than others [8]. It also unfairly distributes the risk of training beginning surgeons to developing countries and contributes to the ethos of the global health inequity.

International electives, of course, can also have a positive impact on the professionalism of trainees [9, 10]. While on elective, trainees come face to face with the severe global health inequity that is currently present. What is occasionally heard in the 6 p.m. news can thus become personal and have a face. These experiences can teach Western physicians to become better advocates for the poor around the world. Previous surveys have suggested that trainees who go on international electives are more likely to volunteer in the future [9, 10].

Trainees may also have an impact on the volume and quality of the surgical output in a hospital [3]. An experienced trainee operating independently may increase the surgical output and increase the center's efficiency. On the other hand, a novice surgeon requires greater supervision and may decrease the output of the host hospital in an area that is likely already underserved.

When a community contributes to a student's learning, a certain amount of reciprocity is implied [2]. Trainees on international electives and their training programs should recognize their obligation to their patients and the local health community. For example, trainees from developed countries often bring resources to the international hospital that may include surgical supplies and, increasingly, money. Financial and resource benefits distributed to the international health system can be reallocated to meet the local needs.

This article supports international surgical electives. The benefits to the local patient population, surgical trainees, and their respective health communities can be substantial. Care can be taken to minimize harm. The following recommendations can help achieve positive elective experiences.

1. Trainees should have achieved an appropriate level of surgical competence in their home program prior to their elective.
2. The training program and student should also prepare themselves for the different ethical dilemmas that may be encountered in this new setting. Guidelines and resources should be identified to help students practice surgery conscientiously.
3. On arrival to an elective site, students should have proper orientation, graduated supervision, and ongoing evaluation. After the elective, the trainee should have a debriefing session to review his/her experience with his/her training program.
4. A written contract clarifying expectations between the training program and host hospital can help ensure that the trainees' experience follows ethical practice. This contract would bind the training program to send only adequately experienced trainees who are prepared for an international elective. The contract would also bind host institutions to provide appropriate support for their visiting trainees. National regulatory bodies could also require such a legal contract prior to providing a medical license to visiting international trainees.

5. International training programs should be structured to foster benefit to both the home institution and the foreign site.

Inexperienced surgeons learning surgical skills in developing countries risk violating basic ethical principles. Experienced resident surgeons who have attained "competence" are best qualified to satisfy these ethical issues and provide mutual benefit to all involved. However, proper orientation is still necessary to help the trainee to adapt to his or her new situation.

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