

Considerations for Medical Students' and Residents' Response to an In-Flight Call for Help

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INTRODUCTION: High quality cardiopulmonary resuscitation and medical care in an emergency can save lives, especially when resources are limited, as when in flight on a commercial airplane. A medical student or resident may be the most qualified person to offer assistance during an in-flight cardiac arrest; however, he/she may not yet have experience acting as a sole provider on the ground. Moreover, physicians-in-training may feel an ethical obligation to help a fellow passenger in need, but later worry that their help is subject to questions of tort liability action. This commentary will discuss who should volunteer to help in flight, considering the capability, ethics, and legal consequences of medical students and residents providing medical assistance on an airplane. It will also discuss how changes in medical curriculum due to the COVID-19 pandemic may aid medical trainees' ability to help during an in-flight emergency as well as propose further opportunities for training.

KEYWORDS: ethics, medical students, medical training, in-flight cardiac arrest, in-flight emergency.

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From 1945–2020, the global incidence of in-flight medical emergencies was 18.2 events per million passengers.³ Cardiac arrest associated with air travel has been estimated to occur in 350 passengers per year in the United States, with 25% of these incidents occurring during flight.⁴ Cardiopulmonary resuscitation (CPR) can be lifesaving if a cardiac arrest is detected early, and the Aerospace Medical Association has published guidelines for the management of in-flight cardiac arrest.¹⁰ This commentary will discuss the role of medical students and residents in the management of in-flight cardiac arrest and propose opportunities for training.

Medical trainees, like any bystander, can volunteer their assistance during an in-flight cardiac arrest if they feel that they can provide safe care. Unlike many bystanders, most medical students and residents are likely to be current in their certification of basic life support and/or advanced cardiac life support skills. Despite this training, medical trainees may still not feel confident when responding to an out-of-hospital medical emergency. In one qualitative review of medical students, “most participants felt that their [competency] in providing emergency care... depended on the extent of their medical and/or emergency care training... [and] expressed complete dissatisfaction with emergency care training” provided by their medical school.¹¹

Medical trainees rightfully feel a moral obligation to respond to an in-flight call for help. As an example, in the qualitative study of medical students responding to out-of-hospital emergencies, “all participants believed that [they] had an ethical obligation to respond... [and] felt that the public expected them to respond.”¹¹ Most medical schools require students to participate in a ceremonial pledge of morality that holds them to a higher ethical standard than required by law. This pledge, combined with the beliefs recorded by medical students,¹¹ suggests that refusing to offer assistance during an in-flight emergency if they have the requisite skills would be considered a violation of the code of ethics that trainees make when they begin their formal medical training.

Medical trainees who respond to an in-flight emergency must consider whether they are qualified to help. The Accreditation Council for Graduate Medical Education (ACGME)

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states that each patient “must have an identifiable... credentialed... [senior-level] physician” assigned to them in order to be within a resident’s scope of practice.¹ A medical trainee acting independently during an in-flight emergency might not meet these ACGME requisites. CPR does not, however, require formal medical training; anyone who has learned the technique can perform it. Secondly, trainees might be considered “supervised” if they are managing the emergency with guidance from a ground-level support physician. The current generation of medical trainees received at least part of their training during the COVID-19 pandemic, and, as a result, they are accustomed to telehealth technology. This group may therefore be better able to communicate with a contracted ground support senior-level physician during an emergency.⁶ Many medical trainees may not know about the ground support physician when making decisions about their qualifications to help. Perhaps assuring volunteers that a ground-based consulting physician will be contacted will reassure a medical volunteer during in-flight emergencies, regardless of level of experience. Additionally, providing Newsom-Smith’s 10-point bulleted list of recommendations for medical volunteers would be helpful.⁷ These recommendations are general reminders about getting consent, taking a history, and recording collected data.

Trainees may also consider the legal consequences of volunteering during an in-flight emergency. Although the Aviation Medical Assistance Act of 1998 protects healthcare professionals on U.S.-registered airplanes when they volunteer their skills during an in-flight emergency,² and Gendreau and DeJohn concluded that “fear of liability should not prompt [physician] reluctance to offer assistance,”⁵ the law still does not shield healthcare workers from the nuisance of being named in a lawsuit for providing assistance. For example, one physician reported that she had been “summoned to appear in both federal and state courts” as a Postgrad Year 1 surgery resident after helping to perform CPR on an airplane.⁸ Medical trainees typically do not carry individual malpractice liability insurance; they operate under the insurance policy of their employers, which is the hospital’s broad coverage of the residency in general. By volunteering to help in an in-flight emergency, trainees are operating outside of their department and, therefore, may not be covered by any malpractice insurance if named in a lawsuit. Although the lawsuit is likely to be unsuccessful, the trainee may be required to pay for their own legal defense.

A potential opportunity for improvement in medical trainees’ volunteering to help in in-flight medical emergencies is to offer medical students and residents additional training in out-of-hospital medical emergencies. This opportunity has been addressed only by a few medical schools that have created their own curriculum on in-flight emergencies, including some with a simulation room that mimics an airplane cabin.⁹ Practical training, in addition to courses in first aid, life support, and other emergency response situations, should be more broadly emphasized during the early years of medical training to reach the largest cohort of medical trainees.

As in any emergency or disaster response, there are both medical and operational considerations to consider. Ultimately, the decision to accept help from a medical volunteer is made by the flight crew. The pilot-in-command is responsible for all decisions regarding the safety of the flight and makes the final decision whether to divert the flight. He/she must consider information from the in-flight medical volunteer and telehealth ground-based consultation support and operational factors such as the availability of a suitable airport. Consequently, the volunteer is required to follow the instructions of crewmembers. The safest action for the situation may be to assist as a basic-life-support-trained volunteer who can provide basic life support.

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