

# MORAL DILEMMAS OF NURSES AND PARAMEDICS DURING IN-FLIGHT MEDICAL EMERGENCIES ON COMMERCIAL AIRLINES



**Author:** Ariel Braverman, BSN, RN, EMT-P, Ashkelon, Israel

**Section Editors:** Pat Clutter, MEd, BSN, RN, CEN, FAEN, Nancy Mannion, DNP, RN, CEN, FAEN

## Abstract

During commercial flights, in-flight medical emergencies may lead the cabin crew to request assistance from qualified health care professionals among the passengers. Although a physician's function and role are well known and virtually universal globally, the role, education, and scope of practice of nurses and paramedics varies significantly. This article analyzes the possible dilemmas that medical professionals other than physicians who assist during in-flight medical emergencies may face and

presents recommendations for aviation authorities. There is an identified need for universal cross-border regulations and an awareness of legal and ethical boundaries for medical responders other than physicians on board commercial international aircraft.

**Key words:** Ethics; Moral dilemma; Paramedic; In-Flight medical emergency; Airline; Flight crew

## Introduction

In-flight medical emergencies on commercial airline flights are not rare events and occur in approximately 1 in 604 commercial flights.<sup>1</sup> When an in-flight medical emergency occurs, the cabin crew will usually be the first to respond, assess the situation, and provide first aid. However, in most cases of uncertainty or apparent urgency, the cabin crew will seek medical assistance by making an announcement requesting the help of any medical professionals on board.<sup>2</sup> Historically, the terminology used in such announcements included the word doctor,<sup>3</sup> which effectively left out all other health care professionals who may also be suited to handle the emergency. This is ironic, given that nurses were employed as flight attendants<sup>4</sup> to provide professional care in case of a medical emergency in the early years of commercial passenger aviation. On the basis of personal observations and experiences, airlines have recently begun to change the terminology in their announcements

from “medical doctor” to “medical professional,”<sup>2</sup> likely because of improved understanding of changes in medical qualifications and the roles of different professionals in the modern medical world.

In-flight medical emergencies can be broadly divided into 2 categories: injury-related and health-related. Today, most injury-related medical emergencies occur as a result of “rough-air” or turbulence. However, burns (especially by hot water or ovens) and falls (typically involving elderly passengers) are also common.<sup>5</sup> Health-related emergencies range from issues related to atmospheric pressure changes (eg, dizziness; nausea; vomiting; vasovagal syncope; gastrointestinal issues; and ear, nose, and throat issues), respiratory difficulties (usually because of pre-existing medical conditions) and may even include complex cardiovascular emergencies, which can lead to fatal arrhythmias and possibly death.<sup>6</sup>

A passenger who experiences an urgent medical condition during a flight may prefer to have an emergency medicine physician, preferably with aeromedical training, on board.<sup>5</sup> However, encountering such a physician on commercial flights may not be particularly common. Experienced nurse practitioners, emergency nurses, or paramedics may be available. These professionals may be more adept to handle medical emergencies than physicians with a nonemergency background. However, the many health professions, other than physicians, mentioned previously are unique to the North American education and licensing model and are not recognized globally.

Ariel Braverman is MPH Student, American Public University, Ashkelon, Israel. **ORCID identifier:** <https://orcid.org/0000-0002-7343-979X>.

For correspondence, write: Ariel Braverman, BSN, RN, EMT-P; E-mails: [Ariel.Braverman@mycampus.apus.edu](mailto:Ariel.Braverman@mycampus.apus.edu); [Ariel.Bravermann@gmail.com](mailto:Ariel.Bravermann@gmail.com).

J Emerg Nurs 2021;47:476-82.

Available online 11 March 2021  
0099-1767

Copyright © 2020 Emergency Nurses Association. Published by Elsevier Inc. All rights reserved.

<https://doi.org/10.1016/j.jen.2020.12.003>

Currently, there are no unified, international standards relating to the medical assistance during in-flight medical emergencies nor regulations regarding who is authorized or to what extent health care professionals are authorized to assist a passenger in distress. Therefore, in-flight medical emergencies may create moral dilemmas for responding volunteers.

### Scope of Practice, Legal Status, and “Duty to Help”

In contrast to physicians, who hold the title of doctor and are universally accepted as medical authorities, the education, scope of practice, and regulation of nurses and paramedics are highly diverse worldwide.<sup>7</sup> Therefore, nurses and paramedics from different countries vary significantly in their knowledge, abilities, public perception, and protection from liability. During an in-flight medical emergency, a nurse or a paramedic must not only gain the trust of the patient but also the flight crew, who are the gatekeepers to the onboard medical kit and other aircraft resources.<sup>5</sup>

It is logical to assume that the crew’s trust and perception of the responding medical provider will be based on their mental model, which is framed by their experiences with their home country’s medical system. Although the professional title may be nurse, the skill set behind the title might be different depending on the country of origin. In more conservative, entirely physician-based medical systems, nursing roles are mostly instrumental, assisting, and “order dependant.”<sup>8</sup> It is likely that airline crews from such countries may not feel comfortable entrusting nurses to solely manage an in-flight medical emergency, particularly if it may cause flight diversion.<sup>9</sup> In other situations, airline crews may have unrealistically high expectations of a nurse, based on a nurse’s role in their home country’s medical system. However, the nurse on board may not be capable nor legally permitted to perform diagnostic or treatment procedures on the basis of their country of licensure. For example, an aircrew from the United States or Canada may expect a relatively high level of skill and independence from a nurse on the basis of their personal experiences in their home countries. However, an individual presenting as a nurse from a country where nurses have mainly assisting duties would not live up to the flight crew’s expectations.

This same situation also applies to paramedics. Many countries do not have the paramedic role, but rather they have physician-based prehospital emergency medical systems. Even the word paramedic has a different meaning in different countries. In some countries, such as the US, Canada, or Israel, a paramedic is an independent advanced emergency medical professional. In other countries, such as

former Soviet Union countries, a paramedic is a first responder with basic first aid training. Additionally, certain medical roles exist only in several former Soviet Union countries. For example, “the feldsher” is a medical professional who has extensive autonomy, especially in the prehospital setting and is capable of managing a wide range of emergencies and chronic conditions.<sup>10</sup> The role of a feldsher is somewhat similar to the nurse practitioner in the US but more focused on the prehospital emergency setting. As a result of these differences and the lack of universal regulations across the global airline industry, legal aspects of medical treatment by health professionals other than physicians on board an aircraft are not well defined and may become complicated. Such uncertainty, coupled with unclear regulations, may lead to skilled and qualified professionals not volunteering in cases of onboard medical emergencies.<sup>11</sup>

### Good Samaritan Laws

There are 2 fundamental versions of Good Samaritan laws. The first is common in the US (in 47 states), Canada, and the United Kingdom and protects bystanders from legal prosecution in the case of assisting another person in distress. The second exists in several countries and territories (including 3 US states), most commonly in continental Europe, and declares a mandatory duty to assist a person in distress (sometimes also called a “Duty to Help” law) (Table).<sup>12</sup> The legal and ethical differences between these 2 versions are significant. The first version provides a safety net for the health care professional to volunteer, whereas the second version theoretically mandates the health care professional to step forward, with the potential for sanctions if they do not. Variations in a nurse’s scope of practice and differences in autonomy, decision-making ability, and legal

TABLE

**A partial list of countries by type of legal protection for health care professionals as bystanders based on the Good Samaritan law**

Protection only	Protection with a duty to help
Australia, Canada (except Quebec), India (not in all states), Ireland, Romania, United States (47 states and DC)	Argentina, Belgium, Brazil, Canada (Quebec), Denmark, France, Finland, Germany, Greece, Israel, Russia, Serbia, Spain, United States (Minnesota, Vermont, Rhode Island)

requirement to act, based on their country (or state) of practice, may lead medical professionals who are not physicians into a morally distressful decision between their duty to care for an ill or injured passenger and the potential legal consequences of applying their knowledge and skills on board an aircraft.

The fundamental ethical principle of duty to care may be perceived as universal and independent from the situation's setting and legal variables.<sup>11,13-15</sup> Therefore, the responding health professional may feel it is ethically required of them to offer their skills if requested, especially if they normally practice in a setting that mandates them to do so under a duty to help law. In most cases of in-flight medical emergencies, medical professionals volunteered and assisted.<sup>16,17</sup> This may be because of the strong moral compass of the health professionals, coupled with the perceived duty to care and the ethical principles of beneficence and nonmaleficence, leading them to step up. However, it is also possible that nurses and paramedics from countries with the mandatory version of the Good Samaritan law would more frequently step forward and offer help than those from countries where the law only provides legal protection. However, there is no literature to date investigating this.

Good Samaritan laws (in all variations) do not apply in cases of gross negligence and "legal bonds"—if the person is on official duty (and is being paid, in some states), he or she must provide medical or nursing care within their scope of practice.

### Overview of the Authority on Board

A review of the current international aviation regulations and legislation suggests that there is no organized or universal methodology for involving passengers with medical qualifications during an in-flight medical emergency. Moreover, there is no unified methodology for handling in-flight medical emergencies, and generally speaking, the airline industry has not made an effort to address the problem. Statistically, owing to increased air traffic, the chances of having a health care professional on board decline each year. Airlines have been advised by several international aviation organizations (eg, International Civil Aviation Organization [ICAO] and International Air Transport Association [IATA]) to build protocols under the guidance of their company medical advisor.<sup>18,19</sup> Many airlines have also established a relationship with medical facilities and medical consulting companies to have physicians on call to assist during emergencies by satellite phone, which is available to the flight crew in most modern aircraft.

According to international aviation law, decisions on board ultimately remain in the pilot-in-command's (PIC's) (or captain's) hands. The origins of the captain's authority are deeply rooted in maritime law and tradition. At sea, operations in an unnatural environment required a single responsible authority. A ship's captain had absolute authority and was the unquestioned commander responsible for the ship, cargo, and crew.<sup>20</sup> Depending on the country's flag being flown, the captain could order someone to be restrained or locked up, remove any staff member, refuse to carry passengers or cargo, and perform a marriage legally.<sup>21</sup> The modern aviation law differs slightly between countries, but the same concept of the PIC's almost absolute power is present. Federal Aviation Regulation 91.3 states, "The PIC of an aircraft is directly responsible for and is the final authority as to the operation of that aircraft." The regulation further notes that in the event of "an in-flight emergency requiring immediate action, the PIC may deviate from any rule to the extent required to meet the emergency."<sup>22</sup> During an in-flight medical emergency, the captain's authority is an essential factor for responding health professionals to consider. It may also create a distressing situation for the responding clinician because the captain's decisions may conflict with what they think is best for the patient on the basis of their view of the situation.<sup>1</sup>

### Possible Conflicts Between Health Professionals and the PIC

An ethical and legal dilemma may arise from the fundamental difference in the responsibility between responding health professionals and the aircraft captain. Health care professionals are typically expected to be fully dedicated to the patient's health. However, the captain of the aircraft is responsible for all of the passengers and crew on board while also subject to company and governmental regulations. If a conflict occurs between the health care professional and the aircraft captain, the health care professional must remember that the captain's authority is superior, despite their responsibility to the patient's health. Although it is highly unlikely, the captain may ignore not only the onboard responder's opinion but also the opinions of the on-call consultant physician. This may be because of flight safety issues, security, or even political reasons, of which health care professionals may not be aware. The PIC may refuse to land because of technical issues (eg, aircraft being too heavy to perform an immediate landing or lack of suitable runway) or because of the

inability to land in an enemy state of the home country of the airline. The additional but no less important factor that the PIC should consider is the presence (or absence) of suitable medical facilities in the vicinity of the possible airport of the diversion. All these factors may lead the PIC to decide differently from the medical volunteer and/or airline consulting physician. In such cases, the captain's decision must be respected by the volunteering health professional. However, it should be documented in the airline medical incident form (an airline form that medical volunteers may be required to fill out and is generally similar to a standard ED chart page). However, the health professionals are ethically expected to continue to provide the best possible treatment for the patient.

### Challenges Among Onboard Responder, Patient, and Medical Authorities

#### REMOTE PHONE CONSULTANT

Thanks to satellite technology, direct contact with medical advisors on the ground have become an available and reliable tool for both the aircrew and the volunteer responders who assist. When an airline consulting physician is contacted and the onboard volunteer is a nurse or a paramedic, the traditional chain-of-command is expected to be followed with the physician providing medical direction to the onboard responders. However, the challenge is that the volunteer responder on board the aircraft is the only individual who can visualize and interact with the patient. Being an independently licensed health care professional, nurses and paramedics must be able to make clinical judgments that are best for the patient, even if they differ from the medical consultant. Such a unique environment and unique dilemmas demand specifically tailored regulatory solutions for the airline industry. For example, a health care provider from an airline's home country may need to provide prescribed treatments and recommendations to a nurse from another country about treating a patient from a third country. The ground consultant may follow protocols and clinical approaches, which may be considered wrong, outdated, inappropriate, or insufficient by the nurse or the paramedic on board. Guided by patient advocacy, which is an essential value of the nursing profession, the nurse may face a dilemma in whether to follow the medical consultant's treatment plan.<sup>23</sup> Such a complicated ethical and legal matrix should have a regulatory basis in international aviation regulations and offer clear protections for responding health care professionals.

#### INFORMED CONSENT

Another dilemma that may be faced by responding professionals involves informed consent of the patient to receive treatment. Patients may be reluctant to receive care from a health professional with whom they are unfamiliar. The patient's interaction with their home country's health care system may lead them to refuse treatment from a nurse or a paramedic because they may have a different set of preferences or understanding based on their experiences. Health care professionals are expected to respect patient autonomy and do their best to protect patient health and life as much as possible in coordination with the patient, the family, and the crew.<sup>9</sup> Refusal of treatment by the patient on the basis of a mistaken perception of the volunteer health care professional's qualifications may cause further damage and deteriorate a situation. Global licensing management and international regulation regarding the scope of practice may assist a crew in reassuring the patient of the qualifications of a specific volunteer health care provider, based on the country of origin and license, and ultimately help the patient to have "truly" informed consent.

#### HANDING OFF CRITICAL OR DECEASED PATIENT

Additional challenges may arise in extreme situations (eg, resuscitation efforts or other critical conditions) in the context of decision-making about landing. It is important to recall that local laws may apply to the volunteer health care professionals and may not be in favor of "non-doctor" treatment in the case of diversion and emergency landing in different countries.<sup>24</sup> Ethical and legal considerations of providing medical treatment and then "handing off" the patient to local health care providers may create problematic situations in countries where Good Samaritan laws do not exist. For example, a critically ill patient may be declared dead on landing, and onboard volunteers may be held accountable if neither variant of the Good Samaritan law is established in the country. The PIC should be aware of the diversion's circumstances and the potential complications of landing with a critically ill or even deceased person on board. Preferably, the concerns should be discussed with the volunteer health care professionals before making the decision.<sup>17</sup> Landing with a deceased person on board (even if the physician on the ground does the declaration of death after landing) may lead to a local investigation (in some places a criminal investigation) and may involve the health care volunteers who assisted during the flight. The volunteer health care provider may not be held accountable for the outcome, but it may cause other challenges for the volunteer. For example, they may be removed from the flight until a more complete

investigation is conducted. Flight crew, ground staff, and health professional volunteers must be aware of these potential complications and be prepared to handle such situations. Comprehensive, international regulations are needed to help ensure an equitable process in place for such situations.

#### MULTIPLE RESPONDERS

When more than 1 health care provider volunteers to assist during an in-flight emergency, it may create a distressing situation and regulatory challenge. When health care volunteers come from different countries and health systems, issues of hierarchy and work relations may be encountered. Cabin crews, especially in-flight service managers (pursers), should be aware of the potential tensions and work toward preventing the complex situation from escalating. Adding to the complex nature of the interaction is that most volunteer health care providers are accustomed to practicing in institutional environments, not in the confined space of an aircraft with limited medical supplies. Even paramedics, who are familiar with out-of-hospital environments, might be under increased stress being in an aluminum tube 10 miles above the ground.<sup>25</sup>

The common assumption is that a physician should step forward to assist, on the basis of the Hippocratic oath requiring them to do so ethically.<sup>24</sup> This ethical duty, which many health care professionals may have, combined with the supposed protection (or requirement) provided by a Good Samaritan law, may propel health care professionals to volunteer. The volunteering health care professionals may quickly find themselves in a stressful, unknown situation in an unfamiliar environment. Stress has negative effects not only on personal and professional performance but also on interpersonal relationships between health care professionals. All of these stressors combined can quickly lead to poor decision-making capacity, poor outcomes, and additional challenges and dilemmas. The aircrew, which is familiar with the environment, should continuously supervise and manage the situation and must be involved in all stages of the response, even if the care being provided is out of their scope.

#### Current Situation and Recommendations for the Airline Industry

Standardization and universality are cornerstones of modern air transport. As a critical element of flight safety and efficient air space management, pilots and dispatchers worldwide must use the same terminology, maps, navigational aids, radio frequency ranges, and more. The ICAO

and the IATA manage de-facto the global airline and airport industry by publishing guidance materials, which are nearly universally accepted by local aviation authorities as mandatory regulation papers. In 1998, the US House of Representatives legislated the Aviation Medical Assistance Act, which includes a section about release from the personal liability for the person assisting in the case of an in-flight medical emergency.<sup>26</sup> However, to date, there is no similar international regulation.

#### ONBOARD EQUIPMENT AND REGULATIONS

Medical manuals by ICAO and IATA focus almost exclusively on the medical aspects of crew certification and occupational hazards (eg, fatigue issues), but little on passengers' health in general and in-flight medical emergencies in particular.<sup>18,19</sup> Manuals include a suggested content list for the onboard medical kit (sometimes called a doctor's kit), but this list is not mandatory. Therefore, every airline creates an inventory for their medical kits that may be quite different.<sup>27</sup> A typical onboard medical kit includes oral non-narcotic analgesics, antihistamines, antinausea agents, and bronchodilators. Most kits worldwide will include intravenous access cannulas, at least 1 type of intravenous crystalloid fluid, and cardioresuscitation drugs. A kit usually includes equipment to measure blood pressure (automatic or manual), a stethoscope, airway management and ventilation equipment such as laryngoscope, airway, and bag valve masks. The kit also typically includes hemorrhage control equipment such as tourniquets and bandages. Nasogastric tubes and urinary catheters may be included but are not common. However, the variety among different kit supplies, especially medications, is significant and is another cause of added stress for the responding health care professional. Therefore, onboard volunteer health care professionals will not know what they will find inside the kit and what other medical equipment is available (eg, an automatic external defibrillator or a pulse oximeter). Unfortunately, there are no standard, unified cross-industry guidelines on how to respond to an in-flight medical emergency or even how to identify which personnel are qualified to use the equipment.

#### PERSONNEL IDENTIFICATION AND DEFINITION OF THE SCOPE OF PRACTICE

Some airlines have made attempts to map medical personnel beforehand on a voluntary basis and have created special frequent flyer programs for licensed medical personnel in their home country. This entices them to fly with their airline and gives the airline the ability to locate health care



professionals in the case of a medical emergency.<sup>28</sup> However, these few programs are limited to individual airlines and cannot resolve the global problem of authorizing or identifying onboard volunteer health care professionals. The growth in air traffic has increased the availability of flights and, as a result, has led to the growth in the incidence of in-flight medical emergencies.<sup>16</sup>

This increase in in-flight medical emergencies demonstrated the need for an organized global effort to map health care personnel flying as passengers. This would allow aircrews to contact willing health care volunteers directly, should the need arise. This should be supported by universal regulations, outlined by ICAO and IATA advisory documents, which could further lead to the creation of universal policies and procedures of managing in-flight medical emergencies. The involvement of both organizations is vital to ensure sufficient support from member states in ICAO and member airlines in IATA because many modern airlines operate and have bases in more than 1 country. In coordination with local aviation authorities, airlines can provide an option for passengers to provide their medical qualifications during the ticketing process, and licensing can be verified by passengers' country medical authority, thereby enabling them to be called on to assist.

Universal regulation of the response methodology to in-flight medical emergencies, responsibilities of passengers who assist as health care professionals, and even more critical, universal and global application of Good Samaritan laws on all commercial flights are also necessary and may save lives and promote flight and passengers' safety. Promoting nursing and paramedic assistance during in-flight medical emergencies requires involvement of not only aviation regulators, but also medical and nursing professional organizations, such as the American Medical Association, American Nurses Association, Emergency Nurses Association, National Registry of Emergency Medical Technicians, International Association of EMT's and Paramedics, European Society for Emergency Nursing, Asia-Pacific Emergency Nursing network, and others. In addition to professional organizations, which are reliable and efficient at evaluating and defining the scope of practice and ethical boundaries for their members, cooperation between local nursing and paramedic authorities (eg, Ministry of Health, schools of nursing, and emergency medical services agencies) of the ICAO member countries and local aviation authorities is vital. These groups can contribute to the identification of differences in education and scope of practice for nurses and paramedics from different countries and help build a unified response plan for in-flight emergencies that can be adopted globally.

## Conclusion

The current response to in-flight medical emergencies is fraught with challenges and dilemmas for the responding volunteer health care professional. The current system is a patchwork of policies, processes, and regulations that is highlighted by the global airline industries' disarray, lack of universality, and limited standardization in managing in-flight emergencies. This creates moral, legal, and ethical dilemmas, especially for medical personnel who are not physicians. The formation of easily translatable, universal policies is long overdue but requires close cooperation between aviation authorities and professional medical and nursing organizations for harmonization between aviation realities and the abilities and values of nurses and paramedics. The United Nations-based ICAO can and should coordinate between member states, and IATA can facilitate the dissemination and adoption of the regulations for commercial airlines. Additional research and legal analysis are necessary to establish the compatibility of universal laws and regulation with aircraft legal status issues mentioned in the Tokyo Convention<sup>29</sup> and liability limitation mentioned in the Montreal Convention.<sup>30</sup> Clear and transparent definitions of what can be done, by whom, and what should be avoided will help nurses and paramedics step forward during an in-flight medical emergency and will help aircrews understand their abilities and set realistic expectations for these health care professionals.

## REFERENCES

- Peterson DC, Martin-Gill C, Guyette FX, et al. Outcomes of medical emergencies on commercial airline flights. *N Engl J Med*. 2013;368(22):2075-2083. <https://doi.org/10.1056/NEJMoa1212052>
- SKYbrary. Medical emergencies - guidance for flight crew. Flight Safety Foundation. Updated March 14, 2020, Accessed April 8, 2020. [https://www.skybrary.aero/index.php/Medical\\_Emergencies\\_-\\_Guidance\\_for\\_Flight\\_Crew](https://www.skybrary.aero/index.php/Medical_Emergencies_-_Guidance_for_Flight_Crew)
- Goodwin T. In-flight medical emergencies: an overview. *Br Med J*. 2000;321(7272):1338-1341. <https://doi.org/10.1136/bmj.321.7272.1338>
- Gertel AR. Data from: Not just a pretty face: the evolution of the flight attendant. *JMU Scholarly Commons*, Deposited 2014. Accessed August 29, 2020. <https://commons.lib.jmu.edu/honors201019/412>
- De Caprariis PJ, De Caprariis-Salerno A, Lyon C. Healthcare professionals and in-flight medical emergencies: resources, responsibilities, goals, and legalities as a good Samaritan. *South Med J*. 2019;112(1):60-65. <https://doi.org/10.14423/SMJ.0000000000000922>
- Chandra A, Conry S. In-flight medical emergencies. *West J Emerg Med*. 2013;14(5):499-504. <https://doi.org/10.5811/westjem.2013.4.16052>
- Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine. J International Models of Nursing. in: *The Future of Nursing: Leading*

- Change, Advancing Health*. Washington (DC): National Academies Press (US); 2011. <https://www.ncbi.nlm.nih.gov/books/NBK209879/>
8. Deng F. Comparison of nursing education among different countries. *Chin Nurs Res*. 2015;2(4):96-98. <https://doi.org/10.1016/j.cnre.2015.11.001>
  9. Bukowski JH, Richards JR. Commercial airline in-flight emergency: medical student response and review of medicolegal issues. *J Emerg Med*. 2016;50(1):74-78. <https://doi.org/10.1016/j.jemermed.2015.09.026>
  10. Ramer SC. The Russian feldsher: a PA prototype in transition. *J Am Acad Phys Assist*. 2018;31(11):1-6. <https://doi.org/10.1097/01.JAA.0000546484.94936.30>
  11. State of California Department of Consumer Affairs (DCA). An explanation of the scope of RN practice including standardized procedures. Board of Registered Nursing. Revised January 2011. Accessed March 28, 2020. <https://www.rn.ca.gov/pdfs/regulations/npr-b-03.pdf>
  12. Howie WO, Howie BA, McMullen PC. To assist or not assist: good samaritan considerations for nurse practitioners. *J Nurs Pract*. 2012;8(9):688-692. <https://doi.org/10.1016/j.nurpra.2012.07.002>
  13. Dowie I. Legal, ethical and professional aspects of duty of care for nurses. *Nurs Stand*. 2017;32(16-19):47-52. <https://doi.org/10.7748/ns.2017.e10959>
  14. Sridharan S, Sridharan K. Aviation nursing and in-flight medical emergencies: aeromedical consideration. *J Nurs Patient Care*. 2018;03:1. <https://doi.org/10.4172/2573-4571.1000120>
  15. American Nurses Association. Scope of practice. Accessed March 28, 2020. <https://www.nursingworld.org/practice-policy/scope-of-practice/>
  16. Martin-Gill C, Doyle TJ, Yealy DM. In-flight medical emergencies: a review. *JAMA*. 2018;320(24):2580-2590. <https://doi.org/10.1001/jama.2018.19842>
  17. Nable JV, Tupe CL, Gehle BD, Brady WJ. In-flight medical emergencies during commercial travel. *N Engl J Med*. 2015;373(10):939-945. <https://doi.org/10.1056/NEJMr1409213>
  18. International Civil Aviation Organization. *Manual of Civil Aviation Medicine*. 3rd ed. ICAO; 2012. Accessed March 28, 2020. [https://www.icao.int/publications/Documents/8984\\_cons\\_en.pdf](https://www.icao.int/publications/Documents/8984_cons_en.pdf)
  19. International Air Transport Association. *Medical Manual*. 11th ed. IATA; 2018.
  20. Gold E. International maritime law in transition: New challenges for education and training. *Mar Policy*. 1989;13(3):178-192. [https://doi.org/10.1016/0308-597X\(89\)90054-7](https://doi.org/10.1016/0308-597X(89)90054-7)
  21. International Maritime Organization. United Nations Convention on the Law of the Sea. Accessed August 29, 2020. <https://www.rn.ca.gov/pdfs/regulations/npr-b-03.pdf>
  22. Federal Aviation Administration DOT. Subpart A-General. (FAR), § 91.9. Fed Aviat Regul. Published August 18, 1989, Accessed August 29, 2020. <https://www.govinfo.gov/content/pkg/CFR-2006-title14-vol2/pdf/CFR-2006-title14-vol2-sec91-3.pdf>
  23. Smith MA. The ethics/advocacy connection. *Nurs Manag*. 2017;48(8):18-23. <https://doi.org/10.1097/01.NUMA.0000521571.43055.38>
  24. Ho SF, Thirumoorthy T, Ng BBL. What to do during inflight medical emergencies? Practice pointers from a medical ethicist and an aviation medicine specialist. *Singapore Med J*. 2017;58(1):14-17. <https://doi.org/10.11622/smedj.2016145>
  25. Bricker JB. Development and evaluation of the air travel stress scale. *J Couns Psychol*. 2005;52(4):615-628. <https://doi.org/10.1037/0022-0167.52.4.615>
  26. Aviation Medical Assistance Act of 1998, 105th Congress, 2nd Session (1998). House of Representatives. Accessed July 5, 2020. <https://www.govinfo.gov/content/pkg/CRPT-105hrpt456/pdf/CRPT-105hrpt456.pdf>
  27. Verjee MA, Crone R, Ostrovskiy G. Medical issues in flight and updating the emergency medical kit. *Open Access Emerg Med*. 2018;10:47-51. <https://doi.org/10.2147/OAEM.S152777>
  28. Lufthansa. The 'Doctor on Board' programme of Lufthansa, Austrian Airlines and SWISS. Accessed August 14, 2020. <https://www.lufthansa.com/lv/en/doctor-on-board>
  29. Summaries of the multilateral treaties deposited with other depositaries. Convention on offences and certain other acts committed on Board Aircraft, Tokyo 14 September 1963. Summarized by International Civil Aviation Organization (ICAO). Accessed August 29, 2020. <https://treaties.un.org/doc/db/Terrorism/Conv1-summary.pdf>
  30. Montreal Convention 1999. International Air Transport Association. Accessed August 29, 2020. <https://www.iata.org/en/policy/smarter-regulation/mc99/>

---

For presubmission guidance, please contact Pat Clutter, MEd, BSN, RN, CEN, FAEN at: [prclutter@gmail.com](mailto:prclutter@gmail.com) or Nancy Mannion, DNP, RN, CEN, FAEN at: [NBonalumi@comcast.net](mailto:NBonalumi@comcast.net). Submit a manuscript directly to *JEN*.

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.