



ELSEVIER

Contents lists available at ScienceDirect

Air Medical Journal

journal homepage: <http://www.airmedicaljournal.com/>

Letter to the Editor

Improving Air Medical Transport Education for Emergency Providers



Dear Editors:

A few years ago, I began my career in the fascinating and ever-changing field of medicine. Rural medicine quickly became my passion, and air medical transport was an aspect that I found to be vital and intriguing. I would like to share an experience I had with air medical transport and the results of my investigation that soon followed. I hope that this story, along with my research findings, bring to light issues that could be fixed through further education and training of medical professionals who use air medical transport.

One evening a set of twins were brought to a community hospital emergency department for evaluation after enduring a head injury when their caretaker slipped while holding them both. Radiologic scans revealed both twins had small intracranial bleeds and skull fractures. Because of their injuries, both infants needed to be transferred to a pediatric tertiary hospital to receive evaluations by specialists. The physician requested helicopter transport to decrease transport time; thus, 2 helicopter services were contacted.

The first helicopter emergency medical service (HEMS) crew consisted of a nurse and paramedic care team. The patient was

placed on monitoring and secured to the cot in a baby seat, and then the helicopter departed. The second HEMS care team consisted of a neonatal nurse practitioner, respiratory therapist, nurse, and paramedic. They placed the patient in an infant Isolette (Isolette®, Draeger Medical Systems, Inc. (Hatboro, PA) for transport.

After the transfer process was complete, I began to ponder the differences I observed between each air medical transport service. To me, it looked like both patients were receiving a different level of care, and I wanted to know if these differences are ever considered when requesting an HEMS flight for a patient.

I interviewed multiple emergency medicine physicians, emergency department staff, ground emergency medical service personnel, and 911 dispatchers from a number of rural Indiana counties to see if they knew where the nearest HEMS bases were located and if they could identify differences between the multiple services. These conversations led me to 3 complex realizations. First, the differences such as helicopter size and instrument flight rules capability were widely known across the professionals I spoke with. Second, no emergency department or 911 center had specific protocols on which service to call, which can be complicated if there is more than 1 HEMS services in your area. An HEMS control center could send 1 of their company's aircraft from a base farther away when in actuality there was another aircraft from another HEMS company closer to your location. Lastly, I found that a majority of the aforementioned interviewees did not know which HEMS services carry blood and fresh frozen plasma on flights. Research has shown that outcomes improve when blood and plasma are

given prehospital.¹ This could be critical for trauma scene flights or critical access hospitals that have a limited blood product supply.

The goal of this letter is to give examples of areas air medical transport services could focus referring hospital and EMS education. Helicopter transport is an integral part of the health care system for rural communities, and addressing some of these issues could potentially improve outcomes among patients. I look forward to someday collaborating with other professionals in the industry to make positive change for the benefit of the patients we serve.

Acknowledgment

I would like to first thank the Butler University Center for High Achievement & Scholarly Engagement on funding my research as part of Butler Summer Institute. Thank you to the numerous first responders, emergency department physicians, and helicopter emergency medical service crews who participated in the study. Lastly, this work would not have been completed without the encouragement and assistance from Dr. Catherine Pangan. Thank you for guiding me in this direction.

Colton Junod, BS
Indiana University School of Medicine,
Terre Haute, IN

Catherine Hagerman Pangan, EdD
Butler University, Indianapolis, IN

Reference

- Holcomb JB, Donathan DP, Cotton BA, et al. Prehospital transfusion of plasma and red blood cells in trauma patients. *Prehosp Emerg Care*. 2015;19:1–9.