

Dispatch Decision Making in an Air Ambulance System

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Background

Emergency medical services typically operate in highly dynamic and uncertain situations. When a request for assistance is received, medical dispatchers must understand the situation at hand, find the appropriate resources, respond with urgency and keep records of what happened using information conveyed through computer systems and/or person-to-person means. Decision-making during dispatch must consider the different ways that patients can be transported and the estimated travel times in order to quickly and safely transfer patients. We started our examination of a medical dispatch system by evaluating the different demands and goals within the dispatch team.



Methodology

Our study focused on dispatch staff within the Operations and Control Centre at Ornge, the air ambulance service of Ontario. We interviewed two operations managers, who are responsible for operational decisions, two physicians, who provide medical assessments and patient triage, and six transport planners, who are responsible for transfer logistics. This study was conducted by interviewing personnel during working shifts within the dispatch center, examining a mix of retrospective and current incidents, and using audio transcripts where available.

Results and Impact

Dispatch decision-making at Ornge was found to be highly cooperative, where planners, operations managers and physicians work to maintain situation awareness and provide/ask for assistance at appropriate times. Differences in opinion typically concern transport solutions, when planners focus on matching the most cost and time efficient resource with logistics, physicians focus on providing the best care possible, and operations managers focus on maintaining coverage with the most effective resources for any given task, including third-party resources. A decision support tool could therefore help standardize dispatch practice and improve time estimates.

Partner Profile

Ornge is the sole provider of air ambulance service in Ontario, providing medical transport for critically ill or injured patients. Approximately 20,000 transfers are undertaken per annum between healthcare facilities, from on-scene responses, or for organ transfers.

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