

ABSTRACT

Give a brief summary of the research proposal. Include specific aims, research hypothesis, background and significance, experimental design and methodology, and data analysis. Must fit within abstract box (4½ x 7½).

Background Growth of air medical transport (and ground transport provided by air medical services) has engendered increasing scrutiny of myriad transport-related issues. Such scrutiny from clinical, regulatory, and reimbursement sectors underlines importance of air medical services' executing quality collaborative research in medical, safety, and cost-effectiveness/utilization realms (among others). Many subjects warranting the transport community's attention cannot be adequately explored by single centers, but re-establishment of collaborative logistics for individual studies is time-consuming, resource-intensive, and inefficient – thus there is pressing need to set up a collaborative network aimed at facilitating a broad range of transport research topics.

Specific aims This proposal aims to use FARE funding as seed money to enable establishment of a multicenter research network, and to execute a “proof-of-concept” study on airway management. In addition to its demonstration of the functionality of the collaborative research network, the airway study's aims are to assess airway practices and outcomes in a very large population of patients undergoing critical care transport (CCT, used herein to denote fixed- and rotor-wing transports as well as ground transports performed by air medical services). Besides demonstrating (likely high) airway management success rates, the study will take advantage of numbers (*i.e.* power) to assess airway-related covariates such as crew configuration and training (*e.g.* assessment of H_0 of no association between crew configuration and airway outcomes/complications).

Experimental design/methods The establishment of the research network, to be called the CCT Collaborative Outcomes Research Effort (*CCT CORE*), has already begun, with membership (and airway study interest) currently comprising 32 U.S./Canadian air transport programs. The *CCT CORE* Airway Project has a prospective observational design. Data will be electronically submitted to a dedicated *CCT CORE* server via Internet, using password-protected/secure procedures compliant with HIPAA (and its Canadian counterpart).

Data analysis Statistical testing will be conducted with software suited to very large datasets (64-bit STATA MP SE 9.2). Descriptive techniques will be used for data such as intubation success; logistic regression will assess dependent variables (*e.g.* intubation success, complications), while adjusting for multiple covariates.