CAEP Academic Symposium Papers

Engaging emergency clinicians in emergency department clinical research

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ABSTRACT

Objective: The objective of this panel was to generate recommendations to promote the engagement of front-line emergency department (ED) clinicians in clinical and implementation research.

Methods: Panel members conducted semi-structured interviews with 37 Canadian adult and pediatric emergency medicine researchers to elicit barriers and facilitators to clinician engagement in research activities, and to glean strategies for promoting clinician engagement.

Results: Responses were organized by themes, and, based on these responses, recommendations were developed and refined in an iterative fashion by panel members.

Conclusions: We offer eight recommendations to promote front-line clinician engagement in clinical research activities. Recommendations to promote clinician engagement specifically address the creation of a research-friendly culture in the ED, minimizing the burden of data collection on clinical staff through the careful design of data collection tools and the use of research staff, and communication between researchers and clinical staff to promote adherence to study protocols.

RÉSUMÉ

Objectif: Le groupe de travail avait pour but d'élaborer des recommandations visant à susciter l'intérêt des cliniciens de premier recours au service des urgences pour la recherche clinique et pour la recherche sur la mise en œuvre.

Méthode: Les membres du groupe ont mené des entrevues semi-structurées avec 37 chercheurs canadiens en médecine d'urgence tant adulte que pédiatrique dans le but de faire ressortir les obstacles à l'intérêt des cliniciens pour les activités de recherche ainsi que les facteurs facilitants, et de glaner des stratégies visant à susciter leur intérêt.

Résultats: L'équipe a groupé les réponses par thème, élaboré des recommandations en tenant compte des réponses reçues, puis amélioré ces recommandations selon un processus itératif.

Conclusions: Le groupe présente huit recommandations visant à susciter l'intérêt des cliniciens de premier recours pour les activités de recherche clinique. Ces recommandations portent tout particulièrement sur l'acquisition d'une culture favorable à la recherche au SU, sur l'allègement le plus grand possible du fardeau de la collecte des données pour le personnel clinique par une conception minutieuse des outils de collecte de données et par le recours au personnel de recherche ainsi que sur les communications entre les chercheurs et le personnel clinique dans le but de favoriser le respect des protocoles d'étude.

Keywords: research methods, clinical research, emergency research

INTRODUCTION

Clinical research in emergency medicine is a cornerstone of progress in emergency care. Novel research evidence forms the basis for improvements in bedside patient care and healthcare policy.[1] In spite of the need for research evidence to inform clinical practice, the conduct of research in the emergency department (ED) setting can be challenging. ED crowding and workload, among other issues, can limit the ability and willingness of clinicians to participate in subject enrolment and data collection. Research activities, if not done thoughtfully, can interfere with ED clinical operations. Nonetheless, there is evidence that clinicians and institutions that participate in clinical research may see better overall patient outcomes.[2] Strategies to encourage clinician engagement in clinical research are essential for the evaluation of novel, potentially practice-changing diagnostic and therapeutic interventions in emergency care.

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 CJEM 2018;20(3):443-447 DOI 10.1017/cem.2017.434

Box 1. Recommendations to improve ED staff engagement with research studies

1) Establish a strong, research-supportive culture in the ED.
2) Ensure that local recruitment infrastructure exists.
3) Identify and address barriers to research prior to the study launch.
4) Ensure clear communication between the research team and ED clinical staff.
5) Optimize data collection material and strategies.
6) Monitor recruitment rates and address recruitment problems.
7) Engage ED nurses and allied health staff.
8) Establish and leverage personal relationships with noncompliant clinical staff.

The 2017 Canadian Association of Emergency Physicians (CAEP) Academic Symposium focused on improving Canadian emergency research output and impact by charging three expert panels to develop recommendations. This paper reviews recommendations of Panel 2 for the engagement of clinicians, primarily physicians and nurses (Box 1), in clinical and implementation research in Canadian EDs. Additional recommendations from the panel on strategies for conducting implementation trials and multicentre studies in the ED are reported in a companion paper.[3] The target audience of these recommendations is both new and experienced clinician scientists seeking to optimize patient recruitment and data collection in the setting of a busy ED.

METHODS

An expert panel was assembled at the direction of the CAEP Academic Section, including four emergency medicine clinician-scientists, a PhD psychologist and PhD nurse with expertise in knowledge translation and clinician behavior, and a PhD biostatistician with expertise in implementation studies.

The panel used a combination of interviews and focus groups (N = 15), as well as email discussions, involving 38 emergency medicine clinician-scientists from across Canada. We sought input on barriers and facilitators with respect to clinician engagement in clinical and implementation research in the ED. The interviews were conducted over a 3-month period, usually in groups of three to five researchers. Responses were grouped into themes that formed the basis of our recommendations. Recommendations were revised in an iterative fashion by the panel members after discussion during conference calls and by email.

Recommendations to improve the engagement of ED staff and physicians

1) Establish a strong, research-supportive culture in the ED.

Interview respondents indicated that the most important facilitator with respect to data collection in the ED was the engagement of ED clinical staff and support of research as part of an institution's clinical culture. Researchers who have been successful in this regard noted that it is vital for investigators to demonstrate the value of research knowledge for clinicians' current practice. Active participation and engagement of clinical personnel rely on knowledge translation at a researcher's home institution. Successful researchers also noted that it is essential for clinician-researchers to continue to act as good clinical colleagues in the ED, including aspiring to clinical excellence and to be helpful with respect to clinical workload and scheduling. A perceived separation between clinicians and clinician-scientists with respect to clinical activities is likely to breed resentment, and, as one respondent put it, "If you want them to help you with your research, they have to like you first."

From an institutional perspective, the establishment of a research-supportive culture also requires clear and consistent messaging from both medical and nursing leadership that research activities are an essential component of an ED's operations.

2) Ensure that local recruitment infrastructure exists.

Data collection in the ED is challenging because the case mix and volume change daily, as do the personnel. Embedded research staff play an important role by screening for potentially eligible patients, verifying study eligibility, completing enrolment and consent processes, and collecting data. Many different models for this infrastructure exist, including research nurses, research coordinators working on multiple or individual studies, and research assistants (either paid or volunteer), who can assist with patient recruitment for multiple studies. The ideal staffing model for a particular ED depends on the type and number of studies being conducted, as well as financial resources. Respondents agreed that the single best investment

https://doi.org/10.1017/cem.2017.434

of limited financial resources is a research coordinator who is able to perform administrative tasks (ethics submissions, contracts, and so on) in addition to data collection.

3) Identify and address barriers to research prior to the study launch.

Busy EDs present a number of challenges with respect to data collection. Clinical staff are occupied with patient care tasks and may feel that research activities impede patient flow. Specifically, departures from standard care such as research consent processes, additional investigations, or nonstandard treatments may prolong ED length of stay for patients participating in research studies. There may also be discomfort on the part of clinical staff administering nonstandard therapies or adhering to clinical trial protocols. Some survey respondents also suggested that fee-for-service remuneration may be a barrier in that physicians may be less inclined to participate in data collection activities in the absence of remuneration.

Eliciting feedback from front-line clinical care providers is essential for identifying barriers and facilitators to data collection. One strategy for addressing and identifying barriers may be to conduct a small pilot study or trial enrolments prior to full rollout of a study, including eliciting feedback from front-line clinical staff as to perceived challenges. The research team can then address barriers and challenges with the ED clinical staff to optimize research processes.

4) Ensure clear communication between the research team and ED clinical staff.

Communication of key study timelines and procedures, including startup and termination, as well as ongoing recruitment, is critical to promote awareness of clinical studies in the ED. Ideal modalities may vary between sites. Email, social media, online videos, departmental websites, and message boards may have varying degrees of penetration to clinical staff. In-person presentations at grand rounds, staff meetings, and educational sessions may increase awareness and give an opportunity for feedback. Study-related contests, with prizes for correct responses, can also promote study awareness. Audit and feedback of individual physicians with respect to the proportion of eligible patients enrolled may also be helpful. Communication of study impact, in addition to enrolment numbers, can reinforce the importance of data collection in the ED. Bidirectional communication is key.

5) Optimize data collection material and strategies.

When data collection by ED physicians and nurses is required, investigators need to formalize strategies to get data collection forms in the hands of clinical providers, and to ensure that the forms are completed quickly and correctly. Active screening for potentially eligible patients can identify patients prior to physician contact, to ensure that data collection forms are available at the time of the clinical encounter. Simply attaching a data collection form to the chart may not be sufficient, and research staff who actively engage with a clinician at the time of a clinical encounter are likely to be more successful in collecting data. Data collection forms should be designed so that they are easily understood, can be completed quickly, and contain only variables that require physician input. Other variables that can be collected by research staff, either directly from the patient or from the medical record, should be collected separately from the physician data form. Permitting research staff assistance with physician data collection forms (e.g., pre-populating selected fields) may also increase compliance with clinical data collection.

6) Monitor recruitment rates and address recruitment problems.

Investigators should continuously track numbers of enrolled, excluded, declined, and missed patients to ensure that recruitment strategies are successful. Addressing the reasons for missing eligible patients can improve recruitment as well as minimize the risk of selection bias. The problem of overlooked or missed eligible patients may be addressed by changing staffing models or by more engagement with clinical staff. Large numbers of patients who decline participation may suggest a need for re-training research staff around consent processes or for simplifying these processes.[4-6] Patient engagement while the study is being planned may identify barriers to patient participation.

7) Engage ED nurses and allied health staff.

The engagement of nursing and allied health staff can be vital to the success of clinical research studies in the ED. Because many clinical studies involve nonstandard interventions, particularly in randomized controlled trials, the acceptance of study interventions by clinical staff is essential for protocol adherence. From a cultural perspective, the commitment of nursing leadership can reinforce the perception that research is an essential component to an ED's clinical operations.

https://doi.org/10.1017/cem.2017.434

The engagement of nursing staff can occur through educational opportunities, engagement of research champions within the nursing staff, and the liberal use of incentives to promote staff engagement. Incentives that have been successfully used by respondents included coffee cards, lunch purchased for nursing staff, and draws for prizes of varying monetary value.

8) Establish and leverage personal relationships with noncompliant clinical staff.

Some physicians may be less enthusiastic about research participation when on duty in the ED, for a variety of reasons. Fostering a research-friendly culture can be helpful, as can the liberal use of recruitment incentives and public acknowledgement of physicians who are most active with clinical research activities in the ED. Audit and feedback around missed eligible cases may also be effective. However, investigators may have to leverage their personal and professional relationships with colleagues to discuss consistent failure to participate in research activities. It is in these cases in which a clinician-investigator's credibility as a clinical colleague is essential to leverage a professional relationship. Reasons for failure to participate in research can be explored and, potentially, rectified.

LIMITATIONS

These recommendations from an expert panel are based on feedback from experienced emergency researchers from across Canada. The panel did not survey front-line ED physicians and nurses; however, the survey respondents have collectively interacted with thousands of front-line care providers, and their extensive experience in promoting the engagement of clinical staff lends validity to our recommendations.

CONCLUSIONS

The engagement of front-line clinical staff is essential for the recruitment of participants and collection of data for clinical research in the ED. Our recommendations reinforce the importance of creating a research-friendly culture in the ED, ensuring that research programs are sufficiently staffed to reduce the operational burden of research activities, continuous monitoring of participant recruitment rates, communicating with front-line staff to identify facilitators and barriers to data collection, as well as the importance of leveraging personal relationships and using incentives to promote clinician engagement with research activities.

Acknowledgements: We gratefully acknowledge all of the respondents (Box A1) who contributed their input on barriers and facilitators with respect to engaging healthcare professionals in clinical and implementation research in emergency departments, and their recommendations on the optimal conduct of implementation studies. Finally, we also thankfully recognize the many physicians, nurses, respiratory therapists, paramedics, and research staff at the study hospitals for their very helpful assistance with patient recruitment and data collection.

Box A1. Interview informants

Alberta
- Brian Rowe
- Eddy Lang
- Grant Innes
- Antonia Stang
- Stephen Freedman
- Samina Ali

British Columbia
- Adam Lund
- Jeffrey Brubacher
- Erik Vu
- Quynh Doan
- Robert Stenstrom

Ontario
- Venkatesh Thiruganasambandamoorthy
- Debra Eagles
- Christian Vaillancourt
- Robert Brison
- Marco Sivilotti
- Andrew Worster
- Bjug Borgundvaag
- Shelley McLeod
- Laurie Morrison
- Sheldon Cheskes
- Jacques Lee
- Jonathan Dreyer
- Mona Jabbour
- Stefanie Borrello
- Roger Zemek
- Martin Osmond
- Amy Plint
- Kathy Boutis
- Kelly Carroll

Nova Scotia and New Brunswick
- Paul Atkinson
- Kirk Magee
- Samuel Campbell
- Robert Green

Quebec
- Natalie Le Sage
- Raoul Daoust
- Jocelyn Gravel
- Patrick Archambault

Competing interests: None declared.

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