



Paradis, E., Reeves, S., Leslie, M., Aboumatar, H., Chesluk, B., Clark, P., et al.

Exploring the nature of interprofessional collaboration and family member involvement in an intensive care context

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Abstract

Little is known about the nature of interprofessional collaboration on intensive care units (ICUs), despite its recognition as a key component of patient safety and quality improvement initiatives. This comparative ethnographic study addresses this gap in knowledge and explores the different factors that influence collaborative work in the ICU. It aims to develop an empirically grounded team diagnostic tool, and associated interventions to strengthen team-based care and patient family involvement. This iterative study is comprised of three phases: a scoping review, a multi-site ethnographic study in eight ICUs over two years; and the development of a diagnostic tool and associated interprofessional intervention-development. This study's multi-site design and the richness and breadth of its data maximize its potential to improve clinical outcomes through an enhanced understanding of interprofessional dynamics and how patient family members in ICU settings are best included in care processes. Our research dissemination strategy, as well as the diagnostic tool and associated educational interventions developed from this study will help transfer the study's findings to other settings.

Keywords

Interprofessional collaboration; teamwork; ethnography; intensive care; patient involvement; clinical outcomes; comparative; multi-site

Introduction

Attempts to improve quality of care and patient safety in the ICU have seen mixed results (Bosk, Dixon-Woods, Goeschel, & Pronovost, 2009; Pronovost, 2011), and some argue that this slow progress is partly due to the poor understanding of the contextual factors that impact health care delivery (Stevens & Shojania, 2011). Consideration of these factors using qualitative research methods may be the next step in improving interprofessional dynamics and health outcomes in the ICU (e.g. Sinuff, Cook, & Giacomini, 2007).

Previous ethnographic studies of teamwork in health care typically focused on intraprofessional dynamics at a single site and excluded patients and families from the analysis (Reeves, Lewin, Espin, & Zwarenstein, 2010), limiting their transferability and usefulness to ICU personnel, managers, patients and families. This study will employ a comparative ethnographic approach: the systematic and careful observation, documentation and analysis of the behaviors and attitudes across several groups or cultures (Rohner, 1977) across several sites. It will build on work by Reeves et al. (2011) to investigate the factors that impact interprofessional care delivery. Comparative ethnography highlights similarities and differences in the meanings and functions of human actions and beliefs, and is particularly suited for the development of diagnostic tools and interventions that consider cultural variation.

Methods

Our study has three goals. First, to comprehensively explore, through the use of ethnographic methods, the collaborative cultures of six ICUs in hospital sites in the US and two ICUs in Canada. Second, based on this rich ethnographic work, to identify an empirically-based diagnostic tool that can indicate whether optimal collaborative team-based care is being delivered. Third, to develop iteratively a set of ICU interventions that focus on strengthening interprofessional collaboration and family member involvement in both care delivery and care decision-making.

This study is divided into three main phases: a scoping review of the qualitative literature on team dynamics in the ICU; data collection across eight different medical/surgical intensive care units across the United States and Canada; and instrument and intervention development to improve interprofessional collaboration and family member involvement in the ICU. It is iterative in nature: findings from earlier stages in the study will inform future steps, as is common and recommended in qualitative research (Reeves, Kuper, & Hodges, 2008).

Phase 1 of the project will involve a scoping review that will answer the question: what do we know about interprofessional care in the ICU from published qualitative research? Recent ethnographic studies on interprofessional dynamics through searches of the PubMed/Medline, CINAHL and Scopus databases will be gathered to provide an insight into this area.

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Phase 2 will consist of on-site research, using four trained ethnographers in eight sites across North America. Approval will be obtained from the human subject review boards at each of the participating institutions. The study will gather ethnographic data as well as quantitative data for each ICU to examine (1) the *processes* of interprofessional collaboration and family member involvement, as well as (2) the clinical *outcomes* each unit generates. Qualitative data collection will include observations, informal and formal interviews of ICU professionals and family members. Documents such as patient and family brochures, care protocols, etc. will also be collected when pertinent, along with unit-level outcomes data on patient length of stays, unplanned readmissions, complication rates, infection rates, error rates (medical errors, adverse drug reactions, near misses) and family outcomes (satisfaction, stress levels).

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In Phase 3 of the study, the research team and a study advisory group will develop a diagnostic tool that will be used to assess the levels of both interprofessional collaboration, and family caregiver involvement in the ICU. It is anticipated that this tool will consist of a range of elements (e.g. observation checklists, structured interviews) that will need to be triangulated to help generate a rapid, but accurate account of the current state of local interprofessional collaboration, and family member involvement in existence at an ICU. In addition, the study will develop a range of interventions aimed at enhancing such collaboration and involvement. Interventions may include but are not limited to workplace education and simulation tools, new practice guidelines, recommendations for organizational restructuring, and organizational policy.

29 30 31 32 33 34 35 36 37 **Analysis and synthesis**

In line with best practices in qualitative research, data analysis will be conducted alongside fieldwork, and fieldwork will be adapted accordingly (Seale 1999). Factors influencing delivery of care will be analyzed using Reeves et al.'s (2010) theoretical framework and investigate relational, processual, organizational and contextual aspects of the delivery of care. Understanding how these factors facilitate or constrain interventions to improve interprofessional collaboration will be key to maximizing their potential.

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After consulting with the project's advisory group, aggregated outcomes data from each ICU will be analyzed and compared across sites, as well as triangulated with qualitative data to explore any possible associations which may link the observed interprofessional processes and behaviors with the clinical outcomes produced by each participating unit.

43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 **Quality issues**

Our study includes several quality checks, including iteration, member checks, accounting for negative instances/search for outliers, use of numbers, reflexivity, peer auditing and triangulation. These mechanisms are part of the best practices suggested in qualitative research literature (e.g. Mays & Pope, 2000; Reeves et al., 2008). The research team will meet weekly to discuss observations and refine data collection techniques. Research will also be guided by an advisory committee consisting of a range of clinical and research colleagues to provide expert advice and support, most importantly during the validation process in Phase 3, when they will be invited to provide feedback on the accuracy, usability, and reliability of these tools.

Discussion

Little is known about the impact of interprofessional collaboration on the quality of care delivery in the ICU (Reeves et al., 2010). This research project has the potential to produce three important outcomes for researchers interested in this area: improving our understanding of interprofessional relations and dynamics in healthcare generally and the ICU specifically, including interactions with family members; contributing to the theory of interprofessional relations; and improving our ability to methodologically connect qualitative data and clinical outcomes. Our advisory group will be instrumental in helping us develop this connection. At the core of this project is the development of an empirically-grounded diagnostic tool to assess the efficiency and effectiveness of interprofessional collaboration in the ICU and evaluate patient/family member involvement, as well as a range of associated interventions to improve identified shortfalls. We expect to share and disseminate our findings through peer-reviewed publications and conference presentations, as well as share the diagnostic tool and intervention package for broader use.

Declaration of interest

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The authors alone are responsible for the writing and content of the paper.

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