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Review Protocol

Identifying Factors That Influence How Pediatric Patients or Their Caregivers Decide to Present to an Emergency Department: A Scoping Review Protocol

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Abstract

Objective: To map and describe the extent and type of evidence in relation to factors that influence how pediatric patients or their caregivers decide to present to an emergency department (ED). **Introduction:** Studies in countries with universal health care systems have suggested that while patients may consider using services outside of the hospital for care, they often end up presenting to an ED. Understanding how pediatric patients and caregivers decide to present to an ED can inform future health care design to mediate decisions before an ED presentation. **Inclusion criteria:** Literature will be included if it assesses patients between zero and 17 years who present to the ED and reports findings from the patient's or caregiver's perspectives. Studies eligible for inclusion are those that focus on ED presentations in a country with universal health care, Organisation for Economic Co-operation and Development (OECD) membership, and classification as a high-income country. Studies that focus on patients transferred to the ED from a residential or correctional facility will be excluded. **Methods:** A scoping review using JBI methodology will be conducted. A preliminary search indicated no scoping reviews in this field have been carried out. CINAHL, MEDLINE ALL, PsycInfo, and Embase will be searched with no date limits. No language restrictions will be applied. Data will be extracted using a standardized form. Articles will be screened and data extracted by two independent reviews, with conflicts resolved by a third reviewer or through discussion. Data will be analyzed through tables with an accompanying narrative summary and PRISMA-ScR.

Keywords: decision making, choice behaviour, emergency medicine, pediatric, universal health care

Introduction

Emergency departments (EDs) are designed to provide treatment for those experiencing severe illness or injuries, operating 24 hours a day and seven days a week (Government of Ontario, 2014). Such departments employ health care providers from a variety of backgrounds, as well as hosting trainees for learning experiences. As workers from various professional backgrounds contribute to patient care in an ED, this setting is considered an interprofessional practice setting (World Health Organization, 2010). In a community setting, health care providers of various professional backgrounds provide comprehensive services for patients by working together with patients, families, caregivers, and communities to deliver high quality care, and this concept is referred to as collaborative practice (World Health Organization, 2010). Collaborative practice can occur among health care providers from settings such as community health clinics, pharmacies, in-patient hospital units, or EDs. Among these settings, interactions with health care providers in the community may play a role in influencing a patient's or caregiver's decision to attend an ED.

Worldwide, EDs are facing challenges of overcrowding, with increased volume and increasing acuity of patients (Canadian Agency for Drugs and Technologies in Health, 2023; Canadian Institute for Health Information, 2024). In Canada, the frequency of ED visits has increased by over one million visits between 2021–2022 and 2022–2023, with the largest increase in visits being observed among those aged 0–4 years (Canadian Institute for Health Information, 2024). While young patients are seeing the greatest increase in ED use, it is also important to note that in a pediatric population, a substantial proportion of presentations are classified as non-urgent, suggesting that these patients may be better treated in a primary care setting (Simpson et al., 2022). Understanding why patients and their caregivers decide to come to the ED can be important for informing future practice and service designs both in the hospital and in the community.

We know that increased numbers of patients are deciding to present to an ED (Canadian Institute for Health Information, 2024). Though scoping and systematic reviews are available in this area, they have largely included studies from the United States, a country without a universal health care system, where decisions to come to an ED have been influenced by payment methods and copayments available in EDs as opposed to other services (Uscher-Pines et al., 2013; Vogel et al., 2019). Studies in countries with universal health care systems have suggested that patients may initially consider using services outside of the hospital for care, but ultimately decide to present to an ED (Agarwal et al., 2012; Truter et al., 2024). If we can understand how patients and their caregivers come to the decision to present to an ED, there is potential to intervene and mediate their decisions before they come to an ED. For example, if patients or their caregivers consider accessing care in the community but feel that shortcomings exist in that service, future interventions that aim to strengthen such community care and promote interprofessional collaborative practice could be implemented.

To understand the context in Canada and other countries with universal health care, we propose a scoping review, using JBI methodologies, to better understand why pediatric patients and/or their caregivers decide to present to the ED. Further information regarding the study context will be described later in this paper. The information generated from this scoping review protocol and subsequent scoping review has the potential to explore existing collaboration among health care professionals from various disciplines and the factors that influence a pediatric patient or their caregiver's decision to present to an ED based on these collaborations. Various literature sources have reported that pediatric patients often present to an ED on the advice of health care providers like family physicians or telephone advice lines (Haasz et al., 2018; Löflath et al., 2021). If health care professionals from a variety of backgrounds are aware of the role they play in an ED attendance, they can work together, directly or through open lines of communication, to provide the most comprehensive care for patients in the most appropriate setting.

The objective of this scoping review is to assess the extent of the literature that discusses aspects of how patients and/or their caregivers decide to present to an ED. This study will map the available literature in an effort to better understand what factors influence a pediatric patient's or caregiver's decision to present to an ED.

Review Question

Primary Question

What is known about the factors that influence a pediatric patient's or caregiver's decision to present to an ED in a universal health care setting? (See Table 1 for population, concept, context [PCC] framework.)

Sub questions

1. Are there any frameworks that outline or guide how patients make the decision to come to an ED in a universal health care setting?
2. What are the commonly reported barriers and enablers to decision-making regarding pediatric ED attendance?

Methods

Eligibility Criteria

This scoping review will consider studies that include pediatric patients or their caregivers who presented to an ED in a setting with universal health care. Studies can include patients of any age but must report data specific to a pediatric population. Perspectives of both patients and caregivers are eligible for inclusion.

Specifics to the ED visit are not limited, and this review will include literature where ED patients had any level of urgency or presenting complaint. Studies involving patients transferred from a residential care or correctional facility to an ED will be excluded, as the decision to attend an ED is presumably not capturing the patient's or caregiver's choice to attend (instead being a choice from the facility).

Concept

The concept examined by this scoping review will include factors and considerations that influence the patient's or caregiver's decision to come to the ED. Literature reporting factors based on triage score alone, or those that exclude patient perspectives, will not be considered for inclusion into the review (e.g., health care provider perceptions of why the patient presented). Patients in the included literature will be able to present to the ED by any means, but studies that focused on the decisions to call an ambulance or emergency services alone will not be included.

Context

This scoping review will consider studies that were conducted in EDs in countries with universal health care, who are a member of the Organisation for Economic Co-operation and Development (OECD), and who are classified as a "high-income country" by the World Bank (Moir & Barua, 2023). This inclusion criteria was selected because these countries were thought to be comparable to the Canadian context—the country of interest—and have been used in past publications to draw comparisons between health care systems comparable to that of Canada. Comparability is assumed based on health system structure and economic status. Using these criteria, the following countries will be included: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan,

Latvia, Lithuania, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Slovenia, South Korea, Spain, Sweden, Switzerland, and the United Kingdom.

Table 1

Population, Concept, Context (PCC) Framework

PCC Element	Definition
Population	• Emergency department patients between zero and 17 years of age with presentations of any severity for any presenting complaint.
Concept	• Factors that influenced the patient's or caregiver's decision to come to the emergency department. • Considerations made by the patient or caregiver that led them to the emergency department.
Context	• Studies carried out in countries with universal health coverage who are a member of the OECD and who are also classified as a "high income country" by the World Bank.

Types of Sources

This scoping review will assess published studies that utilize quantitative, qualitative, and mixed-method design. Specific study designs eligible for inclusion are as per recommendations of JBI methodology (Aromataris et al., 2024).

Experimental and quasi-experimental study designs including randomized controlled trials, non-randomized controlled trials, before and after studies, and interrupted time-series studies will be eligible for inclusion. In addition, analytical observational studies including prospective and retrospective cohort studies, case-control studies, and analytical cross-sectional studies will be considered for inclusion. This review will also consider descriptive observational study designs including case series, individual case reports, and descriptive cross-sectional studies for inclusion.

Qualitative studies will also be considered when they focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, qualitative description, action research, and feminist research.

Systematic reviews will be excluded; however, reference lists of potentially relevant reviews will be mined for potential inclusion in this scoping review. Text and opinion papers will not be considered for inclusion in this scoping review, as these sources are unlikely to provide the patient or caregiver voice or perspective that is of interest to this review.

Grey literature in the form of websites of pediatric hospitals from Canada, Australia, and the United Kingdom will be evaluated. Here, a targeted grey literature search will be carried out to seek information from the hospital that provides messaging directed at patients and families to help support their decision to come to the ED or not. Further, information will be gathered in relation to how easily that messaging was found and whether external sources were linked. Messaging found on the respective websites will be subject to content analysis.

Study Design

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews (Aromataris et al., 2024). The lead author and other members of the study team are trained in JBI methodology.

Search Strategy

The search strategy will aim to locate published studies. A health librarian was consulted for the development of the search strategy. The search strategy was then peer-reviewed by a librarian

using Peer Review of Electronic Search Strategies (PRESS). An initial limited search of MEDLINE ALL (Ovid) was undertaken to identify articles on the topic. The text words contained in titles and abstracts of relevant articles and the index terms used to describe the articles were used to develop a full search strategy for MEDLINE ALL, Embase (Embase.com), CINAHL with Full Text (EBSCOhost), and PsycInfo (EBSCOhost; Appendix A). The search strategy, including keywords and index terms related to the ED, ambulance, and decision-making, will be adapted for each included database. The reference list of all included sources of evidence and relevant literature reviews will be screened for additional studies. Studies published in any language will be included, as long as translation to English is possible using the AI translation software DeepL, further discussed below. The search strategy will apply no date limits to the search.

Study/Source of Evidence Selection

Following the search, all identified citations will be collated and uploaded into Covidence (www.covidence.org) and duplicates removed. Studies published in a language other than English will be translated using the AI translation software DeepL Translator (https://www.deepl.com). If translation using this software is not possible then the study will be excluded.

Pilot testing of inclusion and exclusion criteria will be completed for the title and abstract and full-text screening before each phase to ensure consistency and understanding of inclusion and exclusion criteria among reviewers. Following a pilot test, titles and abstracts will then be screened by two independent reviewers for assessment against the inclusion criteria for the review. Potentially relevant sources will be retrieved in full.

The full text of selected citations will be assessed in detail against the inclusion criteria by two or more independent reviewers. Reasons for exclusion of sources of evidence in full text that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any conflicts that arise between the reviewers at each stage of the selection process will be resolved through a tiebreak by a third reviewer or through discussion. The results of the search and the study inclusion process will be reported in full in the final scoping review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR) flow diagram (Tricco et al., 2018).

As per JBI methodologies for scoping reviews, an assessment of the strength of the body of evidence or individual study risk of bias assessment will not be carried out. This decision is supported by JBI methodologies as the intention of a scoping review is to evaluate the extent of evidence available, not necessarily the quality (Aromataris et al., 2024).

Data Extraction

Data will be extracted from papers included in the scoping review by two or more independent reviewers using a data extraction tool developed by the reviewers (Appendix B). Data will be extracted into Covidence. The data extracted will include specific details about the participants, concept, context, study methods, and key findings relevant to the review question. Data points will focus on key findings to each paper that are specific to a pediatric population (e.g., if a study uses a population from one to 40 years, only results of those 17 and under will be extracted). Further data will be collected, if applicable, regarding patient and caregiver contact with a health care provider before ED presentation, attachment to primary care in the community, preferences of health care provider types to see, what profession they typically see, and past use of health care services in the community if reported.

The draft data extraction tool will be piloted prior to the beginning of data extraction to ensure consistency and understanding among reviewers. If needed, the data extraction tool will be modified and revised during the pilot testing process of extracting data from each included evidence

source. Modifications will be detailed in the scoping review. Any conflicts that arise between the reviewers will be resolved through discussion or with an additional reviewer. If appropriate, authors of papers will be contacted to request missing or additional data where required.

Conclusion

The proposed scoping review aims to understand factors that influence the decision to present to an ED in a universal health care setting by pediatric patients or their caregivers. Results from this scoping review will provide further knowledge about how patients and caregivers make decisions and utilize EDs. Understanding how pediatric patients present to an ED can inform future health care design and potentially strengthen health care programs by mediating decisions made before an ED presentation. This understanding could act to strengthen existing health care services or create fit-for-purpose services in hospital and community settings.

Among other data, this study will extract information regarding preferences and health care use prior to an ED visit in a pediatric population from the perspective of the patient or their caregiver. Reporting of such data is beneficial to interprofessional practice and subsequent interprofessional collaboration, as the role that specific professionals play in advising patients to attend an ED may be better understood as a result. Subsequently publishing such information will allow professionals to reflect on their personal practice and how they contribute to the flow of patients to EDs. The results of this scoping review have the potential to contribute to interprofessional collaborative practice among numerous practice settings. Results and reflection by health care providers can strengthen health systems through increased collaborative practice and aid in illuminating areas of need regarding interprofessional education and its place in a formal education setting.

Protocol Registration

Protocol is registered with Open Science Framework (OSF; Devereaux & Curran, 2024).

Funding Statement

This project did not receive any funding.

Conflict of Interest

The authors have no conflict of interest to declare.

Declaration of Ethics

Ethical approval was not required for this review protocol.

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Appendices

Appendix A: MEDLINE ALL (Ovid) Search Strategy

Line	Concept	Results
1	exp Emergency Service, Hospital/	103,409
2	exp Emergency Medicine/	15,966
3	(emergency adj2 (department* or room* or unit* or ward* or service*)).ti,ab,kf.	184,565
4	("accident and emergency" or "a and e" or "accident & emergency" or "a & e" or "a&e").ti,ab,kf.	75,368
5	(trauma center* or trauma centre* or trauma unit*).ti,ab,kf.	24,380
6	or/1-5	314,067
7	((decision* or decid* or motivat* or reason* or cause* or causing) adj3 (present* or attend* or visit* or seek* or "go to" or "going to" or "went to")).ti,ab,kf.	31,932
8	6 and 7	2,966
9	Ambulances/	7,123
10	(ambulance* or emergency mobile unit* or mobile emergency unit*).ti,ab,kf.	14,018
11	or/9-10	16,562
12	((decision* or decid* or motivat* or reason* or cause* or causing) adj3 (call* or dispatch* or request*)).ti,ab,kf.	4,959
13	11 and 12	150
14	((decision* or decid* or motivat* or reason* or cause* or causing) adj3 (emergency department* or emergency room* or emergency unit* or emergency ward* or emergency service* or "accident and emergency" or "a and e" or "accident & emergency" or "a & e" or "a&e" or trauma center* or trauma centre* or trauma unit*)).ti,ab,kf.	2,689
15	((decision* or decid* or motivat* or reason* or cause* or causing) adj3 (ambulance* or emergency mobile unit* or mobile emergency unit*)).ti,ab,kf.	139
16	8 or 13 or 14 or 15	5,581
17	exp Infant/ or (baby or babies or neonate* or neo-nate* or newborn* or new-born* or infant*).ti,ab,kf.	1,537,889
18	exp Child/ or exp Pediatrics/ or (child* or kid or kids or girl or girls or boy or boys or toddler* or preschool* or pre-school* or kindergarten* or school* or juvenile* or minors or p?ediatric?).ti,ab,kf.	3,250,676
19	Adolescent/ or Young Adult/ or (teen* or youth* or adolescen* or juvenile* or (young adj2 (adult* or person* or individual* or people* or population*)) or youngster* or highschool* or ((secondary or high*) adj2 (school* or education))).ti,ab,kf.	3,053,854
20	exp Parents/ or (parent* or mother* or father* or guardian*).ti,ab,kf.	792,457
21	or/17-20	5,835,584
22	16 and 21	1,954

Appendix B: Draft Data Extraction Form

Study Description	Author
	Year of Publication
	Study Objective
	Study Design
	Data Collection Methods (i.e., survey, interview, chart review)
	Date range of data collection
	Inclusion/Exclusion criteria
	Sample size
	Theoretical framework that underpins study (if applicable)
Population	Presenting complaint of interest (i.e., those with vomiting, those with head injury, etc.)
	Severity of complaint if specified (i.e., now acuity, urgent)
	Population age range
	Did patient, caregiver, or both report outcomes
Concept	Caregiver- or patient-reported factors that influenced their decision to attend the ED (in the pediatric study population)
	Considerations made by the patient or caregiver that led them to the ED (in the pediatric study population)
	Did the study evaluate a shared decision-making tool, if so what were the findings of this evaluation
	Have health equity frameworks or associated measures been used in the study
Context	Country
	Location of ED (rural, urban)
	ED setting (pediatric or mixed ages ED)
	Did a health care provider refer the patient(s) to the ED?
	Did a handoff, or communication between the ED and community provider occur prior to transfer? (specify type of provider)
	ED provider perceptions of appropriateness of visit
	Health care provider type contacted before ED visit
	Health care provider type that referred patient to the ED
	Frequency of patients who reported having and not having a regular primary care provider
	Caregiver- or patient-reported health care provider type preferences and health care provider typically seen