


BMJ Open Hospital-based patient navigation programmes for patients who experience injury-related trauma and their caregivers: a scoping review protocol

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ABSTRACT

Introduction Patients who experience injury-related trauma tend to have complex care needs and often require support from many different care providers. Many patients experience gaps in care while in the hospital and during transitions in care. Providing access to integrated care can improve outcomes for these patients. Patient navigation is one approach to improving the integration of care and proactively supporting patients and their caregivers as they navigate the healthcare system. The objective of this scoping review is to map the literature on the characteristics and impact of hospital-based patient navigation programmes that support patients who experience injury-related trauma and their caregivers.

Methods and analysis This review will be conducted in accordance with Joanna Briggs Institute methodology for scoping reviews. The review will include primary research studies, unpublished studies and evaluation reports related to patient navigation programmes for injury-related trauma in hospital settings. The databases to be searched will include CINAHL (EBSCO), EMBASE (Elsevier), ProQuest Nursing & Allied Health, PsycINFO (EBSCO) and MEDLINE (Ovid). Two independent reviewers will screen articles for relevance against the inclusion criteria. Results will be presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses for Scoping Reviews (PRISMA-ScR) flow diagram and follow the PRISMA-ScR checklist. The extracted data will be presented both tabularly and narratively.

Ethics and dissemination Ethics approval is not required, as the scoping review will synthesise information from publicly available material. To disseminate the findings of this review, the authors will submit the results for publication in a medical or health sciences journal, present at relevant conferences and use other knowledge translation strategies to reach diverse stakeholders (eg, host webinars, share infographics).

BACKGROUND

Injury-related trauma refers to physical injuries that occur suddenly and with enough

Strengths and limitations of this study

- This scoping review will conform to the rigorous methodology manual of the Joanna Briggs Institute (JBI).
- The search strategy was adapted for implementation across the five database, including CINAHL (EBSCO), EMBASE (Elsevier), ProQuest Nursing & Allied Health, PsycINFO (EBSCO) and MEDLINE (Ovid), as well as a grey literature search.
- No quality assessment of the articles will be performed; JBI methodology does not require quality assessments for scoping reviews.
- Only articles in English and French in will be considered for inclusion.

severity to require immediate medical attention.¹ There are many mechanisms of injury-related trauma, such as blunt force, penetrative force and burning. This can result in wounds, broken bones and internal organ damage, among other injuries. Three of the five most common causes of death among individuals between the ages of 5 and 29 are from injury-related trauma.²

Patients who experience injury-related trauma often have complex care needs and frequently require extensive support from multiple care providers during their hospital stay and recovery.³ Many of these patients experience gaps in care while in the hospital and when they are transferred elsewhere, whether to their home, to a rehabilitation facility or to another hospital.^{4–6} Other issues involving this population that have been identified in the literature include disrupted communication and information flow between services⁷; a lack of support for parents during paediatric trauma cases⁸;

patients not being completely informed about their treatment options⁴; and patients being excluded from the decision making around their own course of treatment, which often include several phases.⁴

Individuals and their caregivers with access to integrated care tend to experience improved outcomes.⁹ Integrated care involves a comprehensive delivery of services, which are designed to meet both the specific needs of the individual and the general needs of the population.¹⁰ Evidence shows that the benefits of integrated care include reduced hospital admissions, reduced readmissions, improved treatment guideline adherence and improved quality of life.¹⁰ Patient navigation is a relatively new approach to integrated care that supports patients and families in overcoming gaps and barriers to care by providing patient centred care designed to meet the individual needs of patients, their families and communities.¹¹ It helps patients to access the necessary resources and services to support their needs whether in hospital, during transitions in care or managing their condition at home.¹¹ Patient navigation supports integrated care at multiple levels through a variety of means.¹¹ This includes creating and coordinating a patient's care plan across multiple providers at a micro-level, as well as supporting capacity building with care providers at the meso-level.¹¹ At the macro-level, patient navigation can help ensure integrated care by identifying the needs and adapting services accordingly for an entire patient population.¹¹

While its origins are in cancer care,¹² patient navigation has been utilised to support the care of a variety of conditions, such as diabetes,¹³ kidney disease,¹⁴ mental health¹⁵ and HIV.¹⁶ It has also been adapted to a range of settings, including community settings and primary care clinics.^{11 17} Patient navigation programmes improve the integration of care and proactively support patients and their caregivers as they navigate the healthcare system.¹⁷ For instance, research shows that patient navigation can reduce stress and improve overall experience with the healthcare system¹⁸; increase engagement with mental health services¹⁹; improve clinical care²⁰ and reduce hospital readmissions.²⁰ Patient navigation can also benefit patients who experience injury-related trauma, their families and the care team by offering an integrative, collaborative approach to care and providing consistent and reliable support.^{20–22} As this population faces increased risk of unplanned readmissions, the support provided through navigation programmes can help reduce these readmissions.^{6 21} Patients who experience injury-related trauma frequently require care from multiple types of healthcare providers,³ and patient navigation can facilitate coordination between those care providers.^{17 18} It can also reduce barriers for patients both while accessing multiple care providers across the care system, as well as the gaps in care that frequently occur during transitions by coordinating and integrating care and advocating to fill those gaps at a systems level.^{4–6}

Recently, there has been an increased interest in patient navigation programmes across various health-related

contexts and settings.²³ As such, it will be useful to explore patient navigation programmes for patients who experience injury-related trauma and their caregivers in the hospital setting. The purpose of this scoping review is to map literature on the characteristics and impact of hospital-based patient navigation programmes in this area. Because patient navigation is a service delivery approach that is just emerging in this area of practice, a scoping review will be beneficial to understanding the range of hospital-based navigation programmes for patients who experience injury-related trauma and their caregivers. It will also allow us to explore patient and health system outcomes reported in the literature. Generally, this review will provide information to support the development of hospital-based patient navigation programmes for patients who experience injury-related trauma, their families and care team members. Specifically, this review will inform the development of a pilot programme of patient navigation for trauma patients in New Brunswick, Canada.

METHODS AND ANALYSIS

Scoping reviews are used to summarise the available knowledge on a particular topic,²⁴ and provide a structured and rigorous methodology for examining broad and exploratory research questions.²⁵ A preliminary search of PubMed, PROSPERO and JBI Database of Systematic Reviews and Implementation Reports confirmed that there are no current or ongoing reviews on this topic.

The proposed scoping review will be conducted in accordance with the Joanna Briggs Institute (JBI) methodology for scoping reviews.²⁶ The scoping review will also follow the Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for Scoping Reviews (PRISMA-ScR) checklist,²⁴ which will ensure the review is transparently reported and useful to its users.²⁷ Our study began in June 2021 and the planned end date is June 2022.

Eligibility criteria

Participants

This scoping review will focus on hospital based-patient navigation programmes for patients who experience injury-related trauma and/or their caregivers. Patients who experience injury-related trauma include individuals who experience physical injuries that occur suddenly and with enough severity to require immediate medical attention.¹ The review is not specific to any injury-related trauma, condition, sex, age, ethnicity or other demographic variable. While the treatments for and the needs of patients who experience injury-related trauma vary according to the nature of their injuries, in accordance with the objective of a scoping review,²⁴ this review seeks to identify what literature exists on patient navigation programmes across the spectrum of traumatic physical injury. Because we anticipate there to be a small number of articles, we do not want to limit the scoping review to

any one specific type of traumatic injury. Articles that address a variety of patient navigation programmes, including injury-related programmes, will be included if the characteristics of the injury-related trauma navigation programmes are reported separately; if the characteristics are not reported separately, the articles will be excluded.

A caregiver refers to an unpaid individual (usually a spouse, family member or friend) who provides most of the informal care or support of patients who experience injury-related trauma.²⁸ Excluded from this review are articles that address patients who experience non-injury-related trauma (eg, emotional trauma).

Concept

The main concept is characteristics of patient navigation programmes. Included articles must contain a discussion on the characteristics of the patient navigation programme. Patient navigation will be defined as a partnership between a patient, a caregiver or member(s) of the care team and a patient navigator (including professional, lay or peer navigators) who facilitates timely access to health and/or community services and resources and fosters self-management and autonomy through education and emotional support.^{17 29} We will define programmes as interventions or services intended to improve the navigation of services and resources for patients who experience physical trauma and their caregivers. To ensure consistency, programmes will be included if they align with this definition. For example, studies where the navigator's main role is to deliver clinical care (e.g., triage) will be excluded. Patient navigation programmes that include various titles for the role of the patient navigator, such as nurse navigator, care navigator, peer navigator and lay navigator, will be considered. This review will exclude programmes provided by case managers. There is some overlap between the roles of patient navigators and case managers, such as care coordination. However, navigators typically provide informational and emotional support, while case managers can provide clinical care.^{17 30} Patient navigators help individuals navigate through existing services and can advocate for missing services, whereas case managers fill this need by providing clinical care and acting as a care provider.^{17 30}

Impact, the secondary concept of this review, is the extent to which an intervention was effective in terms of its intended and unintended health and social outcomes.³¹ The American Centers for Disease Control and Prevention defines the evaluation of a programme's impact as the assessment of a programme's effectiveness to achieve its goals (Centers for Disease Control and Prevention³² p1). This review will consider articles that employ various evaluation methods, such as case control studies; analysis of chart data or administrative data; and qualitative studies. It will include negative and positive impacts. Note, however, that articles do not need to report on impact to be included. Articles can be included if they describe the main concept, which is the characteristics of injury-related trauma navigation programmes.

Context

This review will consider articles where the patient navigation programme is delivered in a hospital setting. While we will include hospital-based patient navigation programmes that offer services to support patients who experience injury-related trauma and/or their caregivers in the community (e.g., with the transition from hospital to home), programmes delivered solely within the community will be excluded. Programmes that support patients during their transitions must begin in hospital prior to discharge to be included. There will be no geographical limit to this study as the intent is to explore the characteristics and impact of patient navigation within hospital settings across all locations.

The five steps for JBI scoping reviews

JBI recommends the five following steps when conducting a scoping review: (1) identifying the research question; (2) identifying relevant studies; (3) study selection; (4) charting the data and (5) collating, summarising and reporting the results.^{24 26}

Step 1: identifying the research questions

The research questions for this scoping review are:

1. What are the characteristics reported in the literature of hospital-based patient navigation programmes to support patients who experience injury-related trauma and their caregivers?
2. What is the existing evidence in the literature on the impact of hospital-based patient navigation programmes for patients who experience injury-related trauma and their caregivers?

Step 2: identifying relevant studies

This scoping review will consider all qualitative, quantitative and mixed-method studies for inclusion, except for systematic, scoping and literature reviews. The reference lists of relevant reviews, as well as articles included in the review, will be hand-searched for additional articles. Other literature, such as unpublished studies and/or evaluation reports, will also be considered for inclusion. Only full texts of articles will be considered for review. The review will be limited to literature published in or after 1990 because that is the year patient navigation was conceptualised.³³ Due to the linguistic capabilities of those conducting this review, only articles in English or French will be considered for inclusion.

A JBI-trained librarian (RW) conducted an initial search of the CINAHL database to identify articles on this topic. The librarian formulated a search strategy drawing from the words contained in the titles, abstracts and subject descriptors of these articles. Additionally, the search strategy drew from a number of knowledge syntheses on related topics, as well as the search strategy reported in Doucet *et al* (2022).³⁰ Once the search terms were identified, they were tested in CINAHL in a variety of combinations and using a variety of search fields until it was determined that the search results both completely

reflected the scope of the research available on this topic and avoided unnecessary noise from irrelevant results. The search strategy is designed to capture the varied terminology that describes the role of patient navigator, such as care coordinator and pivot nurse. The terms used in the search are based on a thorough assessment of the terms most common to the research area. Based on this review of the terminology, it is likely that the terms used captured a significant portion of the literature on the topic. No limits were applied to the search.

Next, the search was adapted and implemented across five databases, which are (1) CINAHL with Full-Text (EBSCOhost); (2) Embase (Elsevier); (3) ProQuest Nursing & Allied Health (ProQuest); (4) PsycINFO (EBSCOhost) and (5) MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations, Daily and Versions(R) 1946 to Present (Ovid). Backwards and forwards citation searches will be performed to identify additional studies. We will do so by searching the reference lists of included studies and

using Scopus (Elsevier) to identify and screen studies citing these references. An example of the search strategy applied to MEDLINE is noted in [table 1](#).

The unpublished literature search will use ProQuest Dissertations and Theses; Google and Google Scholar; and targeted searching of relevant websites, such as websites for known patient navigation or trauma-related organisations and programmes. We will use the following keywords in our search: patient navigation, injury related trauma patients, hospital-based care and inpatient. Sources will be screened in Google and Google Scholar according to titles until the point of saturation (ie, after two pages are passed without opening a link). We will include a full list of the grey literature databases and corresponding keyword searches in the final report.

Step 3: study selection

Articles identified by the keyword searches and hand searches of reference lists will undergo a careful selection process. All potentially relevant articles will be collated

Table 1 Search strategy: Syntax used in the MEDLINE (Ovid) search strategy, completed 6 June 2021

Search	Results
1 "navigator*".ab,ti.	3555
2 "pivot nurs* ".ab,ti.	15
3 "care coordinator* ".ab,ti.	767
4 (navigat* adj1 (patient* or communit* or famil* or nurse* or health or system or care or service* or program* or intervention* or support* or assist*)).ab,ti.	7818
5 Patient Navigation/	837
6 1 or 2 or 3 or 4 or 5	11 131
7 "contusion*".ab,ti.	11 518
8 "abrasion*".ab,ti.	9387
9 "dislocat*".ab,ti.	54 612
10 "rupture*".ab,ti.	131 376
11 "sprain*".ab,ti.	5878
12 "auto amputation* ".ab,ti.	84
13 "autoamputation*".ab,ti.	216
14 "penetrat*".ab,ti.	138 985
15 "wound*".ab,ti.	213 013
16 "injur*".ab,ti.	848 155
17 "accident*".ab,ti.	117 725
18 "fracture*".ab,ti.	269 312
19 (physical adj1 trauma).ab,ti.	1094
20 (damage adj1 (organ* or physical)).ab,ti.	14 406
21 (bone adj2 (broke or broken or break*)).ab,ti.	730
22 "lacerat*".ab,ti.	13 255
23 "burn*".ab,ti.	105 755
24 exp "Wounds and Injuries"/	933 086
25 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24	2 072 486
26 6 and 25	1081

Table 2 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Articles that describe the characteristics of an injury-related trauma navigation programme in the hospital setting	Articles that do not describe the characteristic of an injury-related trauma programme and/or are not in the hospital setting (e.g., solely in the community setting)
Articles in which patient navigation is the primary aim of the programme	Articles in which patient navigation is not the primary aim of the programme
Articles published in English and/or French	Articles published in languages other than English or French.
Articles published in or after the year 1990	Articles published before the year 1990
Full text available	Conference papers, articles that are not available in full text
Primary research studies (unpublished studies and evaluation reports will be considered)	Secondary research studies (e.g., any type of review)

and uploaded to Zotero V.5.0 software (Zotero, Fairfax, USA) and duplicates will be removed. The remaining records will then be uploaded to Covidence (Covidence, Melbourne, Australia) and any missed duplicates will be removed. Next, two independent reviewers will screen the titles and abstracts against the inclusion criteria (see [table 2](#)). Reviewers will meet to discuss any discrepancies and a third independent reviewer will be available to resolve any outstanding conflicts.

Once titles and abstracts have been screened, two independent reviewers will screen the full text of the relevant articles against the inclusion criteria. Any conflicts will be resolved either through discussion or by a third independent reviewer. The reviewers will record the reasons for excluding the full texts of articles that do not meet the inclusion criteria.

Step 4: charting the data

Two reviewers will independently extract data from the articles using a data extraction tool, which was developed by the research team using Microsoft Excel (see [table 3](#)). Any disagreements between the reviewers will be resolved through discussion or consultation with a third reviewer. The data extraction tool was piloted by the research team

Table 3 Data extraction instrument

Author
Publication year
Type of source/study design where applicable
Programme description
Geographic location
Type of hospital setting
Navigator title
Navigator background
Population/injury type
Severity of injury
Impacts of patient navigation programme
Programme barriers
Programme facilitators

to ensure comprehensiveness. Extracted data will include specific information about the population, concept, context and key findings related to the scoping review's objective. We will modify the data extraction tool if necessary during the course of the review. Modifications will be detailed in the scoping review. Where required, authors of papers will be contacted to request missing or additional data.

Step 5: collating, summarising and reporting the results

The results of the search will be reported in full in the final scoping review and presented in a PRISMA-ScR flow diagram.²⁴ The extracted data will be presented in tabular format in a way that reflects the scoping review's objective. It will include data such as author(s); publication year; type of source (e.g., published qualitative study, unpublished programme evaluation); programme description, including geographic location, setting, population/type of injury, severity of injury, navigator title and navigator background; and impact (where applicable), barriers (where applicable) and facilitators (where applicable). We will also present the results in narrative format, describing how the results relate to the objective of the scoping review.

ETHICS AND DISSEMINATION

Ethics approval is not required to conduct this study because the scoping review will synthesise information from publicly available material. To disseminate the findings of this review, the authors will submit the results for publication in a medical or health sciences journal, present at relevant conferences and use other knowledge translation strategies to reach relevant stakeholders (e.g., host webinars, share infographics).

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