

Hip and Knee Replacement Patients' Experiences With an Orthopaedic Patient Navigator

A Qualitative Study

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Hip and knee replacement surgery is common, yet more than 10% of patients who undergo total hip replacement (THR) and total knee replacement (TKR) report postsurgery dissatisfaction. Recommendations for improving patient experience after total joint replacement surgery include increasing support to patients, including having a patient navigator available to patients before and after surgery. This article reports on THR and TKR patients' experiences of using an orthopaedic patient navigator. We employed qualitative description to understand THR and TKR patients' experiences of interacting with an orthopaedic patient navigator in a community teaching hospital. Telephone interviews were conducted with 15 purposefully selected total joint replacement patients (TKR: $n = 11$; THR: $n = 4$) who had at least one contact with the navigator. Interview transcripts were analyzed using thematic analysis. Patients described receiving physical support services, emotional support services, informational support services, and care coordination services from the patient navigator. All interactions with the patient navigator were positive. Knowing the patient navigator was available for any future concerns also provided indirect benefits of reassurance, comfort, and security. Patients described these direct and indirect benefits as potentially having long-lasting and resilient positive effects. An orthopaedic patient navigator can have a positive impact on patients' THR and TKR experience and fill gaps in support identified in earlier studies. Addressing patients' complex and varied care needs is well suited to a clinical nurse specialist in the role. Investing in an orthopaedic patient navigator provides reassurance to patients that their needs are a priority and will be addressed in a timely manner.

Introduction

Hip and knee replacement surgery is common in treatment of advanced osteoarthritis and other orthopaedic conditions. Despite reported positive outcomes in the reduction of pain and quality of life, a proportion of

patients still report dissatisfaction postoperatively. As many as 20% of patients who undergo total knee replacement (TKR) report being dissatisfied with their outcomes a year after surgery (Bourne et al., 2009-2010; Bryan et al., 2018; Conner-Spady et al., 2020; Goldsmith et al., 2017; Gunaratne et al., 2017; Hamilton et al., 2012; Lau et al., 2012). Although patients who undergo total hip replacement (THR) tend to be more satisfied with their outcomes than those who have had TKR, as many as 11% of THR patients still report dissatisfaction 1 year after surgery (Anakwe et al., 2011; Bourne et al., 2010; Bourne & Webster, 2005; Conner-Spady et al., 2020; de Beer et al., 2012, 2012; Hamilton et al., 2012; Lau et al., 2012; Mahomed et al., 2011; McHugh & Luker, 2012; Okafor & Chen, 2019). Recommendations for improving patient satisfaction and patient experience after total joint replacement surgery include increasing the guidance and support offered to patients by healthcare professionals, such as having a clinical patient navigator available to patients before and after surgery (Goldsmith et al., 2017; McHugh & Luker, 2012; Sjøveian & Leegaard, 2017; Specht et al., 2018).

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To the best of our knowledge, the patient navigator role has only recently been extended to orthopaedic programs. Patient navigators started in oncology (Parker et al., 2010) and are gradually being applied in primary care (Carter et al., 2018; Valaitis et al., 2017), mental health (Anderson & Larke, 2009), pediatrics (Luke et al., 2018), and various clinical areas in medical programs such as cardiac rehabilitation (Scott et al., 2013), heart failure (Schell, 2014), pneumonia (Seldon et al., 2016), and dementia care (Bernstein et al., 2019). Patient navigator positions may be filled by clinicians or by lay people, with the choice of role illustrating the emphasis of the particular patient navigator program. Although approaches vary, patient navigators provide information, answer questions, help with care coordination and healthcare system navigation, and provide emotional support (Conn et al., 2016; Parker et al., 2010; Trevillion et al., 2015).

Related contemporary improvements in orthopaedic programs—many of which have been driven by moving to bundled payments for Medicare patients in the United States—have focused on improving care coordination and have been shown to improve care and lower costs (Cook et al., 2008; Courtney et al., 2018; Edwards et al., 2015; Iorio et al., 2016–2017; Pelt et al., 2018; Slover, 2016). Although such program improvements sometimes include the use of orthopaedic patient navigators or similar roles (e.g., care coordinators), the independent effects of patient navigators are not usually assessed in this literature. Exceptions to this trend include finding that total hip arthroplasty (THA) and total knee arthroplasty (TKA) patient navigators have resulted in lower care costs (Phillips et al., 2019), including cost savings achieved through replacing in-home physical therapy with telehealth physical therapy (Fisher et al., 2019). Patients also reported satisfaction with receiving postdischarge support from patient navigators offering telehealth physical therapy or motivational interviewing, but such support had no or limited effects on patient functioning (Fisher et al., 2019; Losina et al., 2016). As much more needs to be understood about the role of orthopaedic patient navigators on THA and TKA patient-reported outcomes, we conducted research on an early Canadian patient navigator program in orthopaedic surgery at a community teaching hospital. This article reports on the patient experience of using this patient navigator with the intention to contribute to the orthopaedic literature on patient navigators and the growing body of literature on patient navigators and patient experience across clinical areas.

Methods

A qualitative descriptive design (Sandelowski, 2000) was employed to understand THR and TKR patients' experiences interacting with an orthopaedic patient navigator.

STUDY SETTING

The patient navigator program is contained within the Integrated Care Collaborative (ICC) for hip and knee replacement surgery at North York General Hospital in

Ontario, Canada. The overall aims of the ICC include improving patient care coordination, patient satisfaction, and patient health outcomes. The patient navigator in the ICC is an expansion over traditional navigator roles in other areas due to the availability of the patient navigator to patients throughout the entire care continuum (before, during, and after the surgery, including long-term, postsurgery availability). The patient navigator acts as a primary contact for each THR and TKR patient, addressing issues and concerns before and after surgery. The patient navigator role held by a clinical nurse specialist (CNS) is embedded within the orthopaedic program at the hospital. At the time of the study, THR and TKR patients were introduced to the patient navigator at standard presurgical education sessions. Although all patients have the ability to self-refer to the patient navigator, patients requiring immediate support or follow-up are directly referred by a clinician (e.g., orthopaedic surgeon, preoperative assessment nurse, physiotherapist, occupational therapist). Referrals are made at any point in the patient's care, including the preoperative period or postdischarge from the hospital. The patient navigator checks on patients in the hospital after surgery and is available via telephone, email, or in-person contact before and after surgery for any issue or concern. In the fiscal year of the study as a result of clinical and self-referrals, the patient navigator followed 488 patients, resulting in a total number of 897 interactions. The average number of times the patient navigator saw a single patient was 1.8 times. The average amount of time spent by the patient navigator on a single patient interaction was 16 minutes. Not all of this time was direct interaction with a patient; some of this time was utilized accessing resources, communicating with other healthcare professionals, and preparing documentation for the respective patient.

STUDY SAMPLE

Patients undergoing elective THR and TKR were eligible to participate in the study if they underwent surgery between October 2015 and May 2016, had at least one contact with the patient navigator, and were able to speak, read, and understand English. All THR and TKR patients received a letter on Postoperative Day 1 describing the study and stating that they might be asked to consider participating in the study. The majority of study participants were recruited through an in-hospital approach by the study's research assistant on the patient's second postsurgery day. Remaining participants were recruited by telephone post-hospital discharge. We initially employed criterion sampling (i.e., interviewing any eligible patients who agreed to participate in the study; Patton, 2015); after multiple instances of thin data from patients who contacted the patient navigator a single time, we switched our sampling strategy and purposefully focused on patients who had contacted the patient navigator at least three times. Initial plans were highly exploratory, including plans for an initial sample size of five participants. We increased our sample size to allow for the greater possibility of achieving data saturation with availability of additional resources (Morse, 2015).

DATA COLLECTION AND ANALYSIS

Interviews were conducted via telephone and in English by trained interviewers. Interviews were scheduled 4–6 weeks post-hospital discharge and occurred when most convenient for the participant. The multifaceted semistructured interview guide explored when and why each participant contacted the patient navigator and their experience with and thoughts about using the patient navigator (e.g., Was the patient navigator helpful? How was the patient navigator helpful? Were there any other benefits to using the patient navigator? Do you have any suggestions for how the patient navigator service could be improved?). Despite careful planning and iterative refinement of the interview guide and the interview process, study interviews lasted an average of 7 minutes (minimum 4 minutes, maximum 11 minutes). Interviews were digitally recorded and transcribed verbatim.

We used thematic analysis and line-by-line coding to explore the patient experience of the patient navigator (Aronson, 1995; Patton, 2015). The initial coding scheme was inductively created through multiple research team members (L.T., L.J.G., M.S., and the study research assistant) coding the same two interview transcripts. Remaining transcripts were coded separately by various combinations of two team members using the initial coding scheme. New inductively generated codes were added as needed while coding and shared with other team members. The team had multiple discussions about the codes and refined the coding structure as necessary (e.g., combining similar codes, tightening a code's scope). After all transcripts were coded by at least two coders, the entire team reviewed all text relating to each code to identify major themes and relationships between the major themes. This multistage and multicoder approach helped ensure the rigor of our analysis (Lincoln & Guba, 1985).

ETHICS

The research team was led by the ICC's patient navigator (L.T.). Multiple safeguards were established to maintain study participants' confidentiality and reduce inappropriate influence over the study results by the patient navigator, with a research team member based outside of the hospital (L.J.G.) serving as the external arbiter when needed. The patient navigator was not directly involved in recruitment and data collection. All sampling was controlled by the study research assistant and the external research team member. Limited demographics were linked to interview transcripts to reduce the possibility of the patient navigator linking transcripts with actual patients. Ethics approval was obtained from the North York General Hospital Research Ethics Board.

Results

At the time of the study, 26 THR and TKR patients were eligible to participate. Twenty patients agreed to participate in the study; 15 were interviewed about their use of the patient navigator. The remaining five patients were not contactable by telephone to schedule an interview despite multiple attempts. Of the 15 patients who were

interviewed, 11 patients had a TKR and four patients had a THR.

Patient interactions with the navigator occurred via email, telephone, and in-person contact. Multiple participants had difficulty remembering the specific reasons for being in touch with the patient navigator or services received but recalled having had an encounter with the patient navigator. Other participants were able to recall the specifics of their interaction with the patient navigator and recounted receiving a variety of services from the patient navigator before surgery and during the postoperative recovery period. The majority of services received were prior to hospitalization (preoperative) or after hospital discharge (postoperative), with a few participants recounting receiving services during hospitalization.

Services received from the patient navigator included physical support services, emotional support services, informational support services, and care coordination services (see Table 1). Physical support services included having the patient navigator remove staples postoperatively (e.g., "I had the staples taken out they left one in. So [the navigator] came down and took it out") and assess the knee incision for possible infection in person. Emotional support services from the patient navigator included providing reassurance before and after surgery (e.g., "She was very good at calming me down") and accompanying nervous or uncertain patients to surgical appointments. Informational support services provided by the patient navigator included clinical advice about pain, pain management, infection, medication, and postsurgery exercises (e.g., "I didn't know if I should be concerned because of the symptoms I had so I spoke to [the navigator]"). Other examples of informational support services included facilitating information sharing among family members and the answering of general questions, such as where to go in the hospital for the surgery and physiotherapy and next steps after hospital discharge (e.g., "I had some general questions, especially about physio ... and what I would do right after I left the hospital since I live on my own"). Care coordination services provided by the patient navigator included arranging physiotherapy before or after surgery and arranging accessible transportation so that patients could attend physiotherapy appointments (e.g., "I needed help to set up [accessible] transportation and I called her and she was so helpful").

TABLE 1. THEMES FROM INTERVIEWS

Themes	
Service location	<ul style="list-style-type: none">• Preoperatively• Hospital stay• Postoperatively
Types of service	<ul style="list-style-type: none">• Physical support• Emotional support• Informational support• Care coordination
Direct and indirect benefits	<ul style="list-style-type: none">• Various services received• Feelings of reassurance, comfort, and security

DIRECT AND INDIRECT BENEFITS

Regardless of the type of service received, study participants described appreciating the service and the efforts of the patient navigator (e.g., “My experience was very positive”; “She was so helpful”; “A very welcomed resource”; “She gave me the info, she was easy to speak to, and I felt comfortable”). Knowing that the patient navigator was available for any future concerns also provided indirect benefits of reassurance, comfort, and security (see Table 1), such as described by these study participants:

It was such a good feeling knowing I could call her about anything.... She was there to help me.

Knowing that I could give her a call and she could help me with whatever I needed ... it really helps cut down on uncertainty.

It gave you that security of having someone there to call if you can't reach this person or that person.

The certainty of future support signaled by the patient navigator's presence and the associated positive feelings were further described as having potential to have long-lasting and resilient positive effects. For example, this study participant described drawing comfort from knowing future support was on offer “even if she couldn't put me on the right path to get the right answers.” These effects may have been, in part, driven by the lack of other options. When asked to imagine what they would have done had the patient navigator not been part of the surgical program, some patients expressed that they would not have called anyone (e.g., “I don't know who I would have called at that time”; “My surgeon you can't even get a hold of”) whereas others thought they might have gone to the emergency department for care.

Discussion

THR or TKR patients who interacted with the patient navigator received direct and indirect benefits across the care continuum as a result of having contact with the patient navigator. Direct benefits included physical support services, emotional support services, informational support services, and care coordination services. Indirect benefits included security and reassurance of having a dedicated resource available on an as-needed basis, including any possible future events.

Similar to how patients used and experienced the patient navigator in this study, much of the commentary literature on patient navigators advocates for supporting patients throughout the care continuum (Cantril & Haylock, 2013; ScottFowler et al., 2019; Tan et al., 2015). The physical, emotional, and informational support services offered by the patient navigator in this study directly paralleled the types of support requested by total joint replacement patients in other qualitative work (Goldsmith et al., 2017; McHugh & Luker, 2012) and the range of services recommended to be provided by patient navigators in cancer care (Clark et al., 2014; McBrien et al., 2018; Parker et al., 2010; Tan et al., 2015; Trevillion et al., 2015). Patients in this study experienced the patient navigator as both a backup and a gap filler,

which also resembles the experience of patients with cancer (Tan et al., 2015). In sum, the patient experience of a total hip or knee replacement with a patient navigator suggests that the role is an important addition to this clinical area. These findings reinforce the call for orthopaedic patient navigators from the National Association of Orthopaedic Nurses and mirror the success of patient navigators in cancer care (Scott Fowler et al., 2019).

The patients in this study benefitted from having a registered nurse (RN) in the role as patient navigator. Not all of the reported services would have been able to be provided had the patient navigator role been held by a lay person. A fundamental principle of patient navigation is that the needs of the specific patient population should dictate the navigator's skill level (Freeman & Rodriguez, 2011). Having an RN in this orthopaedic role ensures that the patient navigator is well positioned to adapt to the rapidly changing practice of orthopaedics through ongoing implementation of evidence-based practices (Scott Fowler et al., 2019). Specific benefits of having a CNS versus an RN in the patient navigator role were not a focus of this study but could potentially be an area of study in the future.

The support patients described receiving from the patient navigator program in this study could help improve patient satisfaction after total hip or knee replacement surgery. To build on this research, patient navigators could be studied in relation to specific quality indicators and patient satisfaction scales in orthopaedics (Bourne et al., 2009; Bryan et al., 2018; Goldsmith et al., 2017). This could be modeled on similar work in oncology (Fiscella et al., 2011; Jean-Pierre et al., 2012; Yackzan et al., 2019). Another avenue for future research would be exploring whether the simple presence of the patient navigator helped patients feel supported by the orthopaedic program. Although we only interviewed patients who had received assistance from the patient navigator and therefore cannot test the importance of the patient navigator presence without use by the patient, based on our clinical and research experience, we hypothesize that having a patient navigator available is also important to patients in their assessment of experience and support.

LIMITATIONS

Our findings are meant to help aid and understand the use of patient navigators and contribute to the growing body of theoretical and conceptual literature about patient navigators. As is the usual case for qualitative research (Morse, 2015; Patton, 2015), our sample was not designed to be representative of and to generalize to all total hip and knee replacement surgery patients.

Patients reported forgetting details of their care and the reasons why the patient navigator was contacted, which could explain why interviews were shorter in length than expected. We do not think the length of the interviews was due to interviewer skill; a highly experienced qualitative interviewer performed two interviews and yielded a similar level of detail and interview length as in the interviews conducted by the less experienced interviewer. This leads us to believe that recall bias played a factor in this study; however, we are uncertain as to which overall direction this may have operated.

Patients who did not find the patient navigator service to be of value may have been less likely to remember that interaction. Conversely, patients who had an overall positive experience with their hip or knee replacement surgery may have been less likely to remember the specifics of an interaction with one member of their care team, especially if such interaction was a single time as was the case for many interactions with the patient navigator. We know that at least one patient was concerned that the interview would not remain confidential and did not want to participate in the study for that reason. Others may have participated in the study but truncated their responses due to the same concern.

Conclusion

This study adds to the growing research about patient navigators—particularly with respect to clinical areas outside of cancer—and reports on the specific use of a patient navigator in orthopaedics. Orthopaedic patient navigators can provide direct and indirect benefits for the patient experience when undergoing and recovering from joint replacement surgery. These direct and indirect benefits provide expanded support for patients and help diminish or eliminate gaps in care. Investing in an orthopaedic patient navigator signals the high value the health care system places on an improved patient experience. Having an RN in this role is key for addressing the varied patient care needs in orthopaedic surgery, with the added benefit of providing expanded opportunities for nurse leadership. Given the ongoing increases in total hip and knee replacement surgeries (Canadian Institute for Health Information, 2019), an orthopaedic nurse patient navigator is a strategic investment for advancing the patient and provider aspects of the quadruple aim (Bodenheimer & Sinsky, 2014; Sikka et al., 2015).

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REFERENCES

Anakwe, R. E., Jenkins, P. J., & Moran, M. (2011). Predicting dissatisfaction after total hip arthroplasty: A study of 850 patients. *The Journal of Arthroplasty*, 26(2), 209–213. <https://doi.org/10.1016/j.arth.2010.03.013>

Anderson, J. E., & Larke, S. C. (2009). The Sooke Navigator project: Using community resources and research to improve local service for mental health and addictions. *Mental Health in Family Medicine*, 6(1), 21–28.

Aronson, J. (1995). A pragmatic view of thematic analysis. *The Qualitative Report*, 2(1), 1–3.

Bernstein, A., Harrison, K. L., Dulaney, S., Merrilees, J., Bowhay, A., Heunis, J., Choi, J., Feuer, J. E., Clark, A. M., Chiong, W., Lee, K., Braley, T. L., Bonasera, S. J., Ritchie, C., Dohan, D., Miller, B. L., & Possin, K. L. (2019). The role of care navigators working with people with dementia and their caregivers. *Journal of*

Alzheimer's Disease : JAD, 71(1), 45–55. <https://doi.org/10.3233/JAD-180957>

Bodenheimer, T., & Sinsky, C. (2014). From Triple to Quadruple Aim: Care of the patient requires care of the provider. *The Annals of Family Medicine*, 12(6), 573–576. <https://doi.org/10.1370/afm.1713>

Bourne, R. B., Chesworth, B. M., Davis, A. M., Mahomed, N. N., & Charron, K. D. J. (2009). Patient satisfaction after total knee arthroplasty: Who is satisfied and who is not? *Clinical Orthopaedics and Related Research*, 468(1), 57–63. <https://doi.org/10.1007/s11999-009-1119-9>

Bourne, R. B., Chesworth, B. M., Davis, A. M., Mahomed, N. N., & Charron, K. D. J. (2010). Comparing patient outcomes after THA and TKA: Is there a difference? *Clinical Orthopaedics and Related Research*, 468(2), 542–546. <https://doi.org/10.1007/s11999-009-1046-9>

Bourne, R. B., & Webster, G. (2005). Trends in total hip and knee replacement surgery in Canada—Data from the Canadian Joint Replacement Registry. *Orthopaedic Proceedings*, 87-B(Suppl. III), 325–325. https://doi.org/10.1302/0301-620X.87BSUPP_III.0870325a

Bryan, S., Goldsmith, L. J., Davis, J. C., Hejazi, S., MacDonald, V., McAllister, P., Randall, E., Suryaprakash, N., Wu, A. D., & Sawatzky, R. (2018). Revisiting patient satisfaction following total knee arthroplasty: A longitudinal observational study. *BMC Musculoskeletal Disorders*, 19(1), 423. <https://doi.org/10.1186/s12891-018-2340-z>

Canadian Institute for Health Information. (2019). *Hip and knee replacements in Canada, 2017–2018: Canadian Joint Replacement Registry annual report* (p. 53). Canadian Institute for Health Information.

Cantril, C., & Haylock, P. J. (2013). Patient navigation in the oncology care setting. *Seminars in Oncology Nursing*, 29(2), 76–90. <https://doi.org/10.1016/j.soncn.2013.02.003>

Carter, N., Valaitis, R. K., Lam, A., Feather, J., Nicholl, J., & Cleghorn, L. (2018). Navigation delivery models and roles of navigators in primary care: A scoping literature review. *BMC Health Services Research*, 18(1), 96. <https://doi.org/10.1186/s12913-018-2889-0>

Clark, J. A., Parker, V. A., Battaglia, T. A., & Freund, K. M. (2014). Patterns of task and network actions performed by navigators to facilitate cancer care. *Health Care Management Review*, 39(2), 90–101. <https://doi.org/10.1097/HMR.0b013e31828da41e>

Conn, L. G., Mobilio, M. H., Rotstein, O. D., & Blacker, S. (2016). Cancer patient experience with navigation service in an urban hospital setting: A qualitative study. *European Journal of Cancer Care*, 25(1), 132–140. <https://doi.org/10.1111/ecc.12247>

Conner-Spady, B. L., Bohm, E., Loucks, L., Dunbar, M. J., Marshall, D. A., & Noseworthy, T. W. (2020). Patient expectations and satisfaction 6 and 12 months following total hip and knee replacement. *Quality of Life Research*, 29(3), 705–719. <https://doi.org/10.1007/s11136-019-02359-7>

Cook, J. R., Warren, M., Ganley, K. J., Prefontaine, P., & Wylie, J. W. (2008). A comprehensive joint replacement program for total knee arthroplasty: A descriptive study. *BMC Musculoskeletal Disorders*, 9(1), 154. <https://doi.org/10.1186/1471-2474-9-154>

Courtney, P. M., West, M. E., & Hozack, W. J. (2018). Maximizing physician-hospital alignment: Lessons learned from effective models of joint arthroplasty care. *The Journal of Arthroplasty*, 33(6), 1641–1646. <https://doi.org/10.1016/j.arth.2018.01.023>

- de Beer, J., Petruccioli, D., Adili, A., Piccirillo, L., Wismer, D., & Winemaker, M. (2012). Patient perspective survey of total hip vs total knee arthroplasty surgery. *The Journal of Arthroplasty*, 27(6), 865–869.e5. <https://doi.org/10.1016/j.arth.2011.12.031>
- Edwards, P. K., Levine, M., Cullinan, K., Newbern, G., & Barnes, C. L. (2015). Avoiding readmissions—Support systems required after discharge to continue rapid recovery? *The Journal of Arthroplasty*, 30(4), 527–530. <https://doi.org/10.1016/j.arth.2014.12.029>
- Fiscella, K., Ransom, S., Jean-Pierre, P., Cella, D., Stein, K., Bauer, J. E., Crane-Okada, R., Gentry, S., Canosa, R., Smith, T., Sellers, J., Jankowski, E., & Walsh, K. (2011). Patient-reported outcome measures suitable to assessment of patient navigation. *Cancer*, 117(S15), 3601–3615. <https://doi.org/10.1002/cncr.26260>
- Fisher, C., Biehl, E., Titmuss, M. P., Schwartz, R., & Gantha, C. S. (2019). HSS@Home, physical therapist-led telehealth care navigation for arthroplasty patients: A retrospective case series. *HSS Journal*, 15(3), 226–233. <https://doi.org/10.1007/s11420-019-09714-x>
- Freeman, H. P., & Rodriguez, R. L. (2011). The history and principles of patient navigation. *Cancer*, 117(15), 3539–3542. <https://doi.org/10.1002/cncr.26262>
- Goldsmith, L. J., Suryaprakash, N., Randall, E., Shum, J., MacDonald, V., Sawatzky, R., Hejazi, S., Davis, J. C., McAllister, P., & Bryan, S. (2017). The importance of informational, clinical and personal support in patient experience with total knee replacement: A qualitative investigation. *BMC Musculoskeletal Disorders*, 18, 127. <https://doi.org/10.1186/s12891-017-1474-8>
- Gunaratne, R., Pratt, D. N., Banda, J., Fick, D. P., Khan, R. J. K., & Robertson, B. W. (2017). Patient dissatisfaction following total knee arthroplasty: A systematic review of the literature. *The Journal of Arthroplasty*, 32(12), 3854–3860. <https://doi.org/10.1016/j.arth.2017.07.021>
- Hamilton, D., Henderson, G. R., Gaston, P., MacDonald, D., Howie, C., & Simpson, A. H. R. W. (2012). Comparative outcomes of total hip and knee arthroplasty: A prospective cohort study. *Postgraduate Medical Journal*, 88(1045), 627–631. <https://doi.org/10.1136/postgradmedj-2011-130715>
- Iorio, R., Bosco, J., Slover, J., Sayeed, Y., & Zuckerman, J. D. (2017). Single institution early experience with the bundled payments for care improvement initiative. *The Journal of Bone and Joint Surgery*, 99(1), e2. <https://doi.org/10.2106/JBJS.16.00066>
- Iorio, R., Clair, A. J., Inneh, I. A., Slover, J. D., Bosco, J. A., & Zuckerman, J. D. (2016). Early results of Medicare's bundled payment initiative for a 90-day total joint arthroplasty episode of care. *The Journal of Arthroplasty*, 31(2), 343–350. <https://doi.org/10.1016/j.arth.2015.09.004>
- Jean-Pierre, P., Fiscella, K., Winters, P. C., Post, D., Wells, K. J., McKoy, J. M., Battaglia, T., Simon, M. A., & Kilbourn, K. (2012). Psychometric development and reliability analysis of a patient satisfaction with interpersonal relationship with navigator measure: A multi-site patient navigation research program study. *Psycho-Oncology*, 21(9), 986–992. <https://doi.org/10.1002/pon.2002>
- Lau, R. L., Gandhi, R., Mahomed, S., & Mahomed, N. (2012). Patient satisfaction after total knee and hip arthroplasty. *Clinics in Geriatric Medicine*, 28(3), 349–365. <https://doi.org/10.1016/j.cger.2012.05.001>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.
- Losina, E., Collins, J. E., Wright, J., Daigle, M. E., Donnell-Fink, L. A., Strnad, D., Usiskin, I. M., Yang, H. Y., Lerner, V., & Katz, J. N. (2016). Postoperative care navigation for total knee arthroplasty patients: A randomized controlled trial. *Arthritis Care & Research*, 68(9), 1252–1259. <https://doi.org/10.1002/acr.22829>
- Luke, A., Doucet, S., & Azar, R. (2018). Paediatric patient navigation models of care in Canada: An environmental scan. *Paediatrics & Child Health*, 23(3), e46–e55. <https://doi.org/10.1093/pch/pxx176>
- Mahomed, N., Gandhi, R., Daltroy, L., & Katz, J. N. (2011). The self-administered patient satisfaction scale for primary hip and knee arthroplasty. *Arthritis*, 2011, e591253. <https://doi.org/10.1155/2011/591253>
- McBrien, K. A., Ivers, N., Barnieh, L., Bailey, J. J., Lorenzetti, D. L., Nicholas, D., Tonelli, M., Hemmelgarn, B., Lewanczuk, R., Edwards, A., Braun, T., & Manns, B. (2018). Patient navigators for people with chronic disease: A systematic review. *PLoS One*, 13(2), e0191980. <https://doi.org/10.1371/journal.pone.0191980>
- McHugh, G. A., & Luker, K. A. (2012). Individuals' expectations and challenges following total hip replacement: A qualitative study. *Disability and Rehabilitation*, 34(16), 1351–1357. <https://doi.org/10.3109/09638288.2011.644022>
- Morse, J. M. (2015). Analytic strategies and sample size. *Qualitative Health Research*, 25(10), 1317–1318. <https://doi.org/10.1177/1049732315602867>
- Okafor, L., & Chen, A. F. (2019). Patient satisfaction and total hip arthroplasty: A review. *Arthroplasty*, 1(1), 6. <https://doi.org/10.1186/s42836-019-0007-3>
- Parker, V. A., Clark, J. A., Leyson, J., Calhoun, E., Carroll, J. K., Freund, K. M., & Battaglia, T. A. (2010). Patient navigation: Development of a protocol for describing what navigators do. *Health Services Research*, 45(2), 514–531. <https://doi.org/10.1111/j.1475-6773.2009.01079.x>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). Sage.
- Pelt, C. E., Gililand, J. M., Erickson, J. A., Trimble, D. E., Anderson, M. B., & Peters, C. L. (2018). Improving value in total joint arthroplasty: A comprehensive patient education and management program decreases discharge to post-acute care facilities and post-operative complications. *The Journal of Arthroplasty*, 33(1), 14–18. <https://doi.org/10.1016/j.arth.2017.08.003>
- Phillips, J. L. H., Rondon, A. J., Vannello, C., Fillingham, Y. A., Austin, M. S., & Courtney, P. M. (2019). A nurse navigator program is effective in reducing episode-of-care costs following primary hip and knee arthroplasty. *The Journal of Arthroplasty*, 34(8), 1557–1562. <https://doi.org/10.1016/j.arth.2019.04.062>
- Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health*, 23(4), 334–340. [https://doi.org/10.1002/1098-240x\(200008\)23:4<334::aid-nur9>3.0.co;2-g](https://doi.org/10.1002/1098-240x(200008)23:4<334::aid-nur9>3.0.co;2-g)
- Schell, W. (2014). A review: Discharge navigation and its effect on heart failure readmissions. *Professional Case Management*, 19(5), 224–234. <https://doi.org/10.1097/NCM.0000000000000040>
- Scott, L. B., Gravelly, S., Sexton, T. R., Brzostek, S., & Brown, D. L. (2013). Examining the effect of a patient navigation intervention on outpatient cardiac rehabilitation awareness and enrollment. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 33(5), 281–291. <https://doi.org/10.1097/HCR.0b013e3182972dd6>

- Scott Fowler, J. M., Stephan, A., & Case, K. (2019). Orthopaedic nurse navigator: NAON position statement. *Orthopaedic Nursing*, 38(6), 356–358. <https://doi.org/10.1097/NOR.0000000000000607>
- Seldon, L. E., McDonough, K., Turner, B., & Simmons, L. A. (2016). Evaluation of a hospital-based pneumonia nurse navigator program. *JONA: The Journal of Nursing Administration*, 46(12), 654–661. <https://doi.org/10.1097/NNA.0000000000000422>
- Sikka, R., Morath, J. M., & Leape, L. (2015). The Quadruple Aim: Care, health, cost and meaning in work. *BMJ Quality & Safety*, 24(10), 608–610. <https://doi.org/10.1136/bmjqs-2015-004160>
- Sjøveian, A. K. H., & Leegaard, M. (2017). Hip and knee arthroplasty—Patient's experiences of pain and rehabilitation after discharge from hospital. *International Journal of Orthopaedic and Trauma Nursing*, 27, 28–35. <https://doi.org/10.1016/j.ijotn.2017.07.001>
- Slover, J. D. (2016). You want a successful bundle: What about post-discharge care? *The Journal of Arthroplasty*, 31(5), 936–937. <https://doi.org/10.1016/j.arth.2016.01.056>
- Specht, K., Agerskov, H., Kjaersgaard-Andersen, P., Jester, R., & Pedersen, B. D. (2018). Patients' experiences during the first 12 weeks after discharge in fast-track hip and knee arthroplasty—A qualitative study. *International Journal of Orthopaedic and Trauma Nursing*, 31, 13–19. <https://doi.org/10.1016/j.ijotn.2018.08.002>
- Tan, C. H. H., Wilson, S., & McConigley, R. (2015). Experiences of cancer patients in a patient navigation program: A qualitative systematic review. *JBIR Database of Systematic Reviews and Implementation Reports*, 13(2), 136–168. <https://doi.org/10.11124/jbisrir-2015-1588>
- Trevillion, K., Singh-Carlson, S., Wong, F., & Sherriff, C. (2015). An evaluation report of the nurse navigator services for the breast cancer support program. *Canadian Oncology Nursing Journal*, 25(4), 409–414. <https://doi.org/10.5737/23688076254409414>
- Valaitis, R. K., Carter, N., Lam, A., Nicholl, J., Feather, J., & Cleghorn, L. (2017). Implementation and maintenance of patient navigation programs linking primary care with community-based health and social services: A scoping literature review. *BMC Health Services Research*, 17(1), 116. <https://doi.org/10.1186/s12913-017-2046-1>
- Yackzan, S., Stanifer, S., Barker, S., Blair, B., Glass, A., Weyl, H., & Wheeler, P. (2019). Outcome measurement: Patient satisfaction scores and contact with oncology nurse navigators. *Clinical Journal of Oncology Nursing*, 23(1), 76–81. <https://doi.org/10.1188/19.CJON.76-81>

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