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CADTH Reference List

Robot-Assisted Knee Arthroplasty

CADTH

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About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

Funding: CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

Questions or requests for information about this report can be directed to **requests@cadth.ca**

Key Messages

- We did not find any relevant qualitative studies or mixed-methods studies with a qualitative component examining the perspectives, expectations, and experiences of people in need of knee arthroplasty regarding accessing and engaging with robot-assisted knee arthroplasty.
- We identified other references of potential interest on the topic of patients' or health care providers' perspectives and experiences regarding accessing and engaging with robot-assisted surgeries. These references are listed in the appendix.

Research Question

What literature is available that explores the perspectives, expectations, and experiences of people in need of knee arthroplasty regarding accessing and engaging with robot-assisted knee arthroplasty?

Methods

Literature Search Methods

The literature search strategy used in this report is an update of 1 developed for a previous CADTH report.[1] For the current report, an information specialist conducted a literature search on key resources, including MEDLINE, Scopus, and CINAHL. The search approach was customized to retrieve a limited set of results, balancing comprehensiveness with relevancy. The initial search was limited to English-language documents published between January 1, 2020, and August 11, 2022. For the current report, database searches were rerun on March 23, 2023, to capture any articles published or made available since the initial search date.

Selection Criteria

One reviewer screened the literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed.

Table 1: Selection Criteria

Criteria	Description
Population	Adults aged ≥ 18 years with knee pain who have not responded to nonoperative management, requiring knee arthroplasty (total or partial/unicompartmental) due to any cause (e.g., osteoarthritis, rheumatoid arthritis, psoriatic arthritis, trauma)
Intervention	Primary knee arthroplasty performed using any robot-assisted surgical systems from any manufacturer (e.g., Zimmer Biomet's ROSA, Stryker's MAKO)
Comparator	Any qualitative design
Outcomes	Perspectives on, expectations of, and experiences with accessing and undergoing robot-assisted knee arthroplasty

Criteria	Description
Study designs	Primary qualitative studies; qualitative components of mixed-methods studies

Results

The literature search yielded 67 citations. No relevant qualitative studies or mixed-methods studies with a qualitative component examining the perspectives, expectations, and experiences of people in need of knee arthroplasty regarding accessing and engaging with robot-assisted knee arthroplasty were identified.

References of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

References

Previous CADTH Reports

1. Robot assisted gynecologic and urologic surgeries: a reference list. (*CADTH Rapid response report: reference list*). Ottawa (ON): CADTH; 2022: https://www.cadth.ca/sites/default/files/pdf/htis/2022/RA1232-RA-Gyno-and-Uro-Surgeries-Final.pdf. Accessed 2023 Mar 23.

Primary Qualitative Studies

No literature identified.

Primary Mixed-Methods Studies

No literature identified.

Appendix 1: References of Potential Interest

Previous CADTH Reports

Experiences with and expectations of robotic surgical systems: a rapid qualitative review. (*CADTH Rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2020: https://www.cadth.ca/sites/default/files/pdf/htis/2020/RC1251%20RSS%20for%20Gyno%20Uro%20Surgery%20Final.pdf. Accessed 2023 Mar 23.

Systematic Reviews

Senol Celik S, Ozdemir Koken Z, Canda AE, Esen T. *Experiences of perioperative nurses with robotic-assisted surgery: a systematic review of qualitative studies. J Robot Surg*. 2022. [online ahead of print] PubMed

Yang W, Zhang Q, Mu L, Li X, Wang J, Pang D. Nurses' experiences of participating in robotic surgery: a qualitative meta-synthesis. *Chinese Journal of Nursing*. 2022; 57(16): 2003-2009: http://zh.zhhlzzs.com/EN/10.3761/j.issn.0254-1769.2022.16.013. Accessed 2023 Mar 27.

Additional References

Primary Qualitative Studies

Bjøro B, Ballestad I, Rustøen T, Fosmark MH, Bentsen SB. Positioning patients for robotic-assisted surgery: a qualitative study of operating room nurses' experiences. *Nurs Open*. 2023; 10(2):469-478. PubMed

Lawrie L, Gillies K, Davies L, et al. Current issues and future considerations for the wider implementation of robotic-assisted surgery: a qualitative study. *BMJ Open*. 2022; 12(11):e067427. PubMed

Lawrie L, Gillies K, Duncan E, Davies L, Beard D, Campbell MK. Barriers and enablers to the effective implementation of robotic assisted surgery. *PLoS One.* 2022; 17(8):e0273696. PubMed

Primary Mixed-Methods Studies

Keating T, Fleming CA, Brannigan AE; International Robotic Rectopexy Delphi Group. Using a modified Delphi process to explore international surgeon-reported benefits of robotic-assisted surgery to perform abdominal rectopexy. *Tech Coloproctol*. 2022; 26(12): 953-962. PubMed