

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Pregnancy Testing for Patients Requiring Diagnostic Imaging or Surgery in the Emergency Department: Clinical Effectiveness, Cost-Effectiveness, and Guidelines

Service Line: Rapid Response Service
Version: 1.0
Publication Date: May 28, 2019
Report Length: 5 Pages

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Cite As: Pregnancy testing for patients requiring diagnostic imaging or surgery in the emergency department: clinical effectiveness, cost-effectiveness, and guidelines. Ottawa: CADTH; 2019 May. (CADTH rapid response report: summary of abstracts).

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

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Research Questions

1. What is the clinical effectiveness of performing a pregnancy test prior to diagnostic imaging or surgery in the emergency department setting?
2. What is the cost-effectiveness of performing a pregnancy test prior diagnostic imaging or surgery in the emergency department setting?
3. What are the evidence-based guidelines regarding pregnancy tests prior to diagnostic imaging or surgery in the emergency department setting?

Key Findings

No relevant literature was identified regarding the effectiveness of performing a pregnancy test prior to diagnostic imaging or surgery in the emergency department setting.

Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were pregnancy testing and diagnostic imaging or preoperative care in the emergency setting. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2009 and May 22, 2019. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Pregnant persons of childbearing age presenting to emergency departments who require diagnostic imaging and/or surgery Subgroups of interest: non-responsive patients, patients with suspected overdose
Intervention	Q1-3: Any type of pregnancy test performed prior to diagnostic imaging or surgery (e.g. urine pregnancy testing, qualitative serum testing, quantitative serum testing)
Comparator	Q1-Q2: Any other type of pregnancy testing performed prior to diagnostic imaging or surgery; no pregnancy test performed prior to diagnostic imaging or surgery

	Q3: Not applicable
Outcomes	Q1: Clinical effectiveness (e.g., length of hospital stays, readmission, disease progression, adverse events, harms, safety) Q2: Cost-effectiveness (e.g., cost per QALY, cost-benefit analysis, cost-effectiveness analyst etc.) Q3: Guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations and evidence-based guidelines

Results

No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, or economic evaluations were identified regarding the effectiveness of a pregnancy test prior to diagnostic imaging or surgery in the emergency department setting. Additionally, no evidence-based guidelines were identified regarding pregnancy tests prior to diagnostic imaging and surgery.

References of potential interest are provided in the appendix.

Overall Summary of Findings

No relevant literature was found regarding the effectiveness of performing a pregnancy test prior to diagnostic imaging or surgery in the emergency department setting therefore, no summary can be provided.

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Economic Evaluations

No literature identified.

Guidelines and Recommendations

No literature identified.

Appendix — Further Information

Previous CADTH Reports

1. Point-of-care urine pregnancy screening in the emergency department: diagnostic accuracy, clinical utility, and guidelines. (*CADTH Rapid response: summary of abstracts*). Ottawa (ON): CADTH; 2017: <https://cadth.ca/sites/default/files/pdf/htis/2017/RB1173%20POC%20Pregnancy%20Screen%20Final.pdf>. Accessed 2019 May 27.
2. Pre-operative pregnancy testing in women of childbearing age: cost-effectiveness and guidelines. (*CADTH Rapid response: reference list*). Ottawa (ON): CADTH; 2015: <https://cadth.ca/pre-operative-pregnancy-testing-women-childbearing-age-cost-effectiveness-and-guidelines>. Accessed 2019 May 27.

Non-Randomized Studies

Diagnostic Imaging or Surgery Not Specified

3. Singer AJ, Taylor M, LeBlanc D, et al. Early point-of-care testing at triage reduces care time in stable adult emergency department patients. *J Emerg Med*. 2018;55(2):172-178.
[PubMed: PM29887410](#)

Economic Evaluations

Emergency Department Setting Not Specified

4. Hutzler L, Kraemer K, Palmer N, Albert D, Bosco JA. Cost benefit analysis of same day pregnancy tests in elective orthopaedic surgery. *Bull Hosp Jt Dis* (2013). 2014;72(2):164-166.
[PubMed: PM25150345](#)

Clinical Practice Guidelines – Methodology and Emergency Room Setting Not Specified

5. Dobson G, Chow L, Flexman A, et al. Guidelines to the practice of anesthesia - revised edition 2019. *Can J Anaesth*. 2019;66(1):75-108.
[PubMed: PM30560409](#)

Additional References

Inclusion of Pregnancy Testing in Point of Care Not Specified in Abstract

6. Rooney KD, Schilling UM. Point-of-care testing in the overcrowded emergency department--can it make a difference? *Crit Care*. 2014;18(6):692.
[PubMed: PM25672600](#)