Routine Urinalysis for Low-Risk Pregnancies: Clinical Utility and Guidelines
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Acknowledgments:

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### Research Questions

1. What is the clinical utility of urinalysis for low risk pregnant women?

2. What are the evidence-based guidelines regarding routine urinalysis for low risk pregnant women?

### Key Findings

One non-randomized study was identified regarding routine urinalysis for low-risk pregnancies. Additionally, four evidence-based guidelines were identified regarding routine urinalysis for low-risk pregnancies.

### Methods

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, ECRI (Health Devices Gold), Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit retrieval by publication type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2007 and April 21, 2017. 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>
<thead>
<tr>
<th>Population</th>
<th>Pregnant women without renal disease or hypertension</th>
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<tbody>
<tr>
<td>Intervention</td>
<td>Q1-2: Urinalysis</td>
</tr>
<tr>
<td>Comparator</td>
<td>Q1-2: No Urinalysis</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Q1: Clinical benefit (e.g. detection of disease, change in patient or fetal outcomes), Q2: Guidelines</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines</td>
</tr>
</tbody>
</table>
Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One non-randomized study was identified regarding routine urinalysis for low-risk pregnancies. Additionally, four evidence-based guidelines were identified regarding routine urinalysis for low-risk pregnancies. No relevant health technology assessments, systematic reviews, meta-analyses, or randomized controlled trials were identified.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One non-randomized study and four evidence-based guidelines were identified regarding routine urinalysis for low-risk pregnancies.

The sole non-randomized study identified was a cross sectional study on healthy, at term, pregnant women who underwent a cesarean delivery after regular antenatal follow-up appointments. Urinalysis was performed using a dipstick method to screen for urinary tract infections (UTIs) during pregnancy. The authors concluded that with regular follow-up urinalysis screening and counseling, the frequency of pregnant woman experiencing bacteriuria decreases during cesarean deliveries.

Four evidence based guidelines were identified – two guidelines authored by NICE, one guideline published by the Society of Obstetricians and Gynaecologists of Canada (SOGC), and one guideline published by the Institute for Clinical Systems Improvement (ICSI). Two guidelines recommend against using urinalysis for screening of some conditions in pregnant women and two guidelines recommend urinalysis as a routine screening test. Two guidelines discussed glucose urinalysis and three guidelines discussed protein urinalysis.

For screening of healthy pregnant women, one guideline recommends against using urinalysis to test glucose levels in pregnant women to assess the risk of developing gestational diabetes. The ICSI guideline also recommends the discontinuation of urine dipstick testing or urinalysis for glycosuria, as the reported sensitivity of the test is only 23-64%.

For assessing the potential development of preeclampsia in pregnant women, the ICSI guideline recommends against routine urine dipstick or urinalysis as the tests for albumin levels is unreliable, although this is based on low quality evidence. In contrast, the SOCG guideline recommends that urinary dipstick testing by visual or automated machines can be used to screen proteinuria in low-risk pregnant women.

Finally, a NICE guideline for antenatal care in uncomplicated pregnancies recommends that urinalysis be performed at each antenatal visit as a screening tool for preeclampsia. The recommended antenatal schedule also recommends testing urine for proteinuria at each antenatal visit until term.
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


Guidelines and Recommendations


Appendix — Further Information

Clinical Practice Guidelines -- Uncertain Methodology


Non Randomized Studies – Alternate Comparator


