Integrating Qualitative Research Into Health Technology Assessment in Canada

The CADTH Experience

Laura Weeks, PhD
lauraw@cadth.ca

Kristen Moulton, MSc

Tamara Rader, MLIS

Sarah Garland, MPH

Ken Bond, BEd, MA

Scientific Advisor

Clinical Research Officer

Patient Engagement Officer

Clinical Research Assistant

Director, Patient Engagement and International Affairs
Disclosure

• CADTH receives funding from Canada’s federal, provincial, and territorial governments, with the exception of Quebec.
• CADTH collects fees for three of its programs:
  o CADTH Common Drug Reviews
  o CADTH pan-Canadian Oncology Drug Review
  o CADTH Scientific Advice
CADTH is an independent, not-for-profit organization responsible for providing Canada’s health care decision-makers with objective evidence about the optimal use of drugs and medical devices.
Our Programs and Services

HEALTH TECHNOLOGY MANAGEMENT PROGRAM

- Health Technology Assessment Service
- Optimal Use Service
CADTH Health Technology Expert Review Panel

• An advisory body to CADTH

Develop guidance and/or recommendations on non-drug health technologies to inform a range of stakeholders within the Canadian health care system

• Use a multi-criteria deliberative framework
<table>
<thead>
<tr>
<th>Framework Domain</th>
<th>Information/Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background/Context</td>
<td>• Audience; issue and policy question(s)</td>
</tr>
<tr>
<td>Clinical Need</td>
<td>• Background on health condition • Size of affected population • Availability of alternatives</td>
</tr>
<tr>
<td>Clinical Benefit</td>
<td>• Clinical effectiveness • Impact on clinical management</td>
</tr>
<tr>
<td>Harms</td>
<td>• Safety</td>
</tr>
<tr>
<td>Patient Preferences</td>
<td>• Acceptability of health technology by patient • Non-health benefits</td>
</tr>
<tr>
<td>Economic Impact</td>
<td>• Cost-effectiveness • Infrastructure support costs • Budget impact</td>
</tr>
<tr>
<td>Implementation</td>
<td>• Ease of integration into existing workflow • Training/competency • Ease of repair/maintenance</td>
</tr>
<tr>
<td>Legal</td>
<td>• Legal impacts</td>
</tr>
<tr>
<td>Ethics</td>
<td>• Consistent with ethical values</td>
</tr>
<tr>
<td>Environmental Impact</td>
<td>• Environmental impact of health technology (e.g., nuclear waste material)</td>
</tr>
</tbody>
</table>
Health Technology Assessment

- Clinical systematic review
- Economic evaluation and modelling
- Budget impact analysis
<table>
<thead>
<tr>
<th>Framework Domain</th>
<th>Information/Elements</th>
<th>Analysis Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background/Context</td>
<td>Audience; issue and policy question(s)</td>
<td>PROJECT SCOPING</td>
</tr>
<tr>
<td>Clinical Need</td>
<td>Background on health condition, Size of affected population, Availability of alternatives</td>
<td>PROJECT SCOPING</td>
</tr>
<tr>
<td>Clinical Benefit</td>
<td>Clinical effectiveness, Impact on clinical management</td>
<td>CLINICAL SYSTEMATIC REVIEW</td>
</tr>
<tr>
<td>Harms</td>
<td>Safety</td>
<td>CLINICAL SYSTEMATIC REVIEW</td>
</tr>
<tr>
<td>Patient Preferences</td>
<td>Acceptability of health technology by patient, Non-health benefits</td>
<td>?</td>
</tr>
<tr>
<td>Economic Impact</td>
<td>Cost-effectiveness, Infrastructure support costs, Budget impact</td>
<td>ECONOMIC EVALUATION, MODELLING, BUDGET IMPACT ANALYSIS</td>
</tr>
<tr>
<td>Implementation</td>
<td>Ease of integration into existing workflow, Training/competency, Ease of repair/maintenance</td>
<td>?</td>
</tr>
<tr>
<td>Legal</td>
<td>Legal impacts</td>
<td>?</td>
</tr>
<tr>
<td>Ethics</td>
<td>Consistent with ethical values</td>
<td>?</td>
</tr>
<tr>
<td>Environmental Impact</td>
<td>Environmental impact of health technology (e.g., nuclear waste material)</td>
<td>?</td>
</tr>
</tbody>
</table>
Our Approach

• Systematic review of literature related to patient and caregiver perspectives and experiences

• Research questions address perspectives and experiences of those impacted by policy recommendations
  • Broad, letting issues of importance emerge through review

• Protocol developed in parallel with other HTA sections
  • External peer review
Systematic Review Methods

- Following best practices:

  Peer reviewed, literature search: MEDLINE, Embase, PsycINFO, CINAHL, and PubMed

  Study selection:
  - Predefined eligibility criteria
  - Double citation screening

  Data extraction:
  - Study and patient characteristics, verbatim results, in duplicate

  Quality appraisal:
  - Validated tool, in duplicate

  Data Analysis:
  - Thematic synthesis
Reporting and Deliberation

• Separate chapter defined within HTA report
• Presentation to CADTH Health Technology Expert Review Panel (HTERP) by CADTH researchers
• Inform deliberation and recommendations
Example: Mismatch Repair Deficiency (dMMR) Testing for Patients with Colorectal Cancer

What are the perspectives of colorectal cancer patients, their family members, and caregivers regarding the value and impact of dMMR testing on their health, health care, and lives?
Records identified through database searching, after duplicates removed (n = 1,638) → Records screened (n = 1,638) → Records excluded (n = 1,488) → Full-text articles assessed for eligibility (n = 150) → Studies included in thematic synthesis (n = 89) → Full-text articles excluded, with reasons (n = 61)
- Abstract (n = 21)
- Not related to perspectives of testing (n = 11)
- General population sample (n = 9)
- Review article (n = 8)
- Results not separate for HNPCC (n = 6)
- Letter to the editor (n = 3)
- Not English or French (n = 1)
- Study protocol (n = 1)
- Thesis (n = 1)
<table>
<thead>
<tr>
<th>Descriptive Themes</th>
<th>Categories</th>
<th>Analytic Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a decision to learn mutation status</td>
<td>Decision-making process</td>
<td>Deciding to learn about one’s mutation status is an individualized process with implications for the individual and their family</td>
</tr>
<tr>
<td></td>
<td>Reasons for, and factors related to, learning mutation status</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reasons for not, and factors related to not, learning mutation status</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Perceptions of genetic testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowledge of genetic testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Uptake of testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Willingness to pay</td>
<td></td>
</tr>
<tr>
<td>Learning mutation status</td>
<td>Expectations regarding testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Confidence in test results</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfaction with decision to learn mutation status</td>
<td></td>
</tr>
<tr>
<td>Behaviours, feelings, and experiences after learning mutation status</td>
<td>Impact of knowing mutation status</td>
<td>Living with knowledge of one’s mutation status has individual and family implications</td>
</tr>
<tr>
<td></td>
<td>Disclosure and discussion of mutation status</td>
<td></td>
</tr>
</tbody>
</table>
What Did the Synthesis Add?

**Rationale to support recommendations**

- Patients and their families value knowledge of dMMR status to manage future risk and implement screening
- Universal testing could improve equity by reaching those who do not actively seek testing

**Implementation considerations**

- Potential for behaviour change
- Need for education: patients, families, providers
- Genetic counselling capacity
Lessons Learned

CADTH and HTERP recognize value
- Methodological rigor
- Unique evidence to inform deliberations and recommendations

Need to balance practicality and idealism
- Ideal methods versus what is feasible

Requires specialized skills and resources
- CADTH staff
- CADTH HTERP

Requires champions
- Buy-in at all levels
- Shift from clinical and economic focus
Summary and Moving Forward

- CADTH is now including a systematic review of patient preferences and experiences into assessments of medical devices, procedures, and programs
  - Stakeholder demand
  - Best practices
  - Inform assessments and deliberations
- Ongoing methods development, training, process refinement
- Most important outcome: we are doing it
More information available at:
https://www.cadth.ca/collaboration-and-outreach/advisory-bodies/health-technology-expert-review-panel

CADTH HTERP Deliberative framework available at:
https://www.cadth.ca/sites/default/files/pdf/hterp/HTERP_DFW_e.pdf
Our evidence is your evidence
cadth.ca
Stay Connected

requests@cadth.ca  @cadth_acmts

LinkedIn  YouTube  flickr  slideshare

CADTH
E.g. 2: Monitoring for atrial fibrillation (AF) in discharged stroke and transient ischemic attack (TIA) patients

What are the perspectives and experiences of patients who have had a stroke and/or TIA, and caregivers, regarding the value and impact of outpatient cardiac monitoring devices for AF monitoring on their health, health care, and quality of life?
1776 citations identified from electronic literature search

30 potentially relevant reports retrieved from other sources (grey literature, hand-search)

1702 citations excluded

104 potentially relevant articles retrieved for scrutiny (full text, if available)

95 reports excluded:
- Irrelevant population (7)
- Irrelevant intervention (4)
- Irrelevant outcomes (69)
- Other (review articles, editorials) (12)
- Duplicate (1)
- Non-English (1)
- Full text not available (1)

9 reports included in review
Results – Themes and Categories

Positive side effect(s) as it relates to compliance

Patient experiences with outpatient cardiac monitoring devices

- Comfort
- Ease of use
- Side effects
- Impact on daily activities — during and post-monitoring

Patient perspectives regarding outpatient cardiac monitoring devices

- Satisfaction
- Confidence
What Did the Synthesis Add?

Not a lot of data BUT

• Raised the issues and made them part of deliberation
• Prompted clinical insight, based on experiences with patients

Context

• How experience could change, depending on results, during versus post-monitoring

Implementation

• Recommended length of monitoring