Collaborative HTA: The Whole is Greater than the Sum of its Parts

CADTH SYMPOSIUM 2018

HQO: Nancy Sikich, Andree Mitchell, Sarah McDowell, Vivian Ng
CADTH: Lesley Dunfield, Laura Weeks, Gino De Angelis, Bernice Tsoi
Panel outline

- Pan-Canadian HTA Collaborative
- Harmonized principals
- Process overview and alignment
- Clinical overview
- Economic overview
- Conclusions and discussion
Pan-Canadian HTA Collaborative

• Formed in 2011
• Share best practices, minimize duplication of effort
• Contribute to joint initiatives
• Foster collaboration among regional HTA producers
• Improve the development and use of HTA
  • Improve patient outcomes
  • Improve health system sustainability
Pan-Canadian HTA Collaborative

- Steering committee of senior executives from:
  - Health Quality Ontario (HQO)
  - Institut National d’Excellence en Santé et en Services Sociaux (INESSS)
  - Institute of Health Economics (IHE)
  - British Columbia Health Technology Review (BC-HTR)
  - CADTH
- Identifies strategic priorities of the Collaborative
- Operations committee – oversees formation and functioning of the working groups
- Secretariat support - CADTH
Pan-Canadian HTA Collaborative

- Priority topics:
  - Share topics under consideration and projects in progress
  - Harmonized principals of HTA conduct
  - Process harmonization and collaborative opportunities
  - Horizon scanning
Harmonized HTA Methods

Objective

To identify and document harmonized methodological principles for the assessment of medical devices, diagnostic tests, and surgical procedures across the pan-Canadian HTA organizations

Why

• Minimize methodological differences
• Enhance inter-organizational use of HTA work
• Reduce duplication based on methodological differences
Methods

- Four working groups covering methodological topics:
  - Literature searching
  - Clinical systematic review
  - Economic analyses
  - Patient engagement
- At least one member from each agency per working group
- Draft statements written using sources of good practice
- Each organization surveyed about draft statements
- Consultation including email, teleconferences and in-person meeting
Results

- Harmonized (draft for consultation)
  - 13 literature searching statements
  - 24 clinical systematic review statements
  - 32 economic analysis statements

- Under development
  - Patient engagement statements
Literature Searching

3. The literature search strategies are developed, executed, and documented by medical librarians/information specialists/conseillers(ères) en information scientifique in consultation with the HTA team.

9. It is recommended that the final search strategy for at least one database is peer-reviewed before final execution using the Peer Review of Electronic Search Strategies (PRESS) Checklist.

Key discussion areas: databases to search, date and language limits, grey literature searching, peer review, updating search results, authorship
Clinical Systematic Review

6. The inclusion and exclusion criteria for selection of eligible citations and full-text publications are developed a priori and are explicitly stated for each research question according to the population (P), intervention (I), comparators (C), outcomes (O), study design, and publication characteristics.

13. Where insufficient information is provided within a study report to extract sufficient outcome data, attempts should be made to contact the study authors for clarification, and the results of this exercise should be reported. If study authors are not contacted, a rationale should be provided.

Key areas for discussion: protocol or clinical review plan, definition of the research question, contacting study authors, use of software, assessing quality of evidence, single vs. double review
2. Research questions should be defined for each of the components of the economic assessment included. The questions should be consistent with the clinical review question and policy question under consideration.

10. The perspective of the primary economic evaluation should reflect the scope of the decision problem. Often, this reflects the perspective of a publicly funded health system, although, other perspectives may be undertaken (e.g. society, patient, hospital).

**Key areas for discussion:** relevance of economic systematic review, minimum importance difference in QALYS/utilities, discount rate, adopting a common cost effectiveness threshold
Patient Engagement

Key areas for discussion

• Different approaches across the four agencies
• Harmonization of engagement principles vs methods
  • When and why vs how
• Weaving patient engagement throughout other harmonized statements
Next Steps

• Further refine based on diverse Collaborative input
  • Include new BC HTR partner
• Assess implementation potential through project collaborations
• Posting on each organization’s website
• Maintain a “living” document
• Consider harmonization of other HTA practices, such as topic prioritization
Process alignment
CADTH/HQO Collaboration

Opportunities

• Maximizing efficiency and minimizing duplication in HTA production for CADTH and Health Quality Ontario
• Sharing and learning best practices in HTA process and project management

Challenges

• Aligning processes for HTA development between agencies
• Ensuring target audience needs for each agency are met through project scope definition
• Defining roles and responsibilities for each agency
• Balancing timelines between agencies and adjusting schedules
CADTH/HQO Collaboration

Two Scenarios

- Health Quality Ontario leads: project follows HQO process (with minor tweaks)

- CADTH leads: project follows CADTH process (with minor tweaks)
CADTH/HQO Collaboration

Project Charter

- Developed jointly by the management teams of CADTH and HQO
- Defines the objective and terms of engagement of the partnership
- Specifies what is in and out of scope
- Provides an agreed-to approach for aligning processes and timelines
  - Accommodate HTERP and OHTAC meetings
  - Align public feedback postings for deliverables
- Defines roles and responsibilities
- Determine which HTA components will be conducted and by whom
CADTH/HQO Collaboration

Project Sponsors

- Vice-President of Medical Devices and Clinical Interventions, CADTH
- Vice-President, Evidence Development and Standards, HQO
- Provide approval and champion the project at the executive level

Project Leadership

- Director, HTA & Program Development, CADTH
- Director, HTA & Rapid Response, CADTH
- HTA Director, HQO
- Share responsibility for the ultimate delivery of the project, support and direct the operational activities of the project team, and secure project resources

Project Ownership

- Manager, Clinical Research, CADTH
- Manager, Clinical Research & Manager, Operations, HQO
- Provides oversight and support to the entire project team
CADTH/HQO Collaboration

### Roles

<table>
<thead>
<tr>
<th>CADTH</th>
<th>HQO</th>
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</thead>
<tbody>
<tr>
<td>Project management officer</td>
<td>Operations manager</td>
</tr>
<tr>
<td>Project management specialist</td>
<td>Business analyst</td>
</tr>
<tr>
<td>Manager, Clinical Research</td>
<td>Manager, Clinical Reviews</td>
</tr>
<tr>
<td>Clinical research officer</td>
<td>Clinical epidemiologist</td>
</tr>
<tr>
<td>Clinical research assistant</td>
<td>Senior program analyst, Patient, Caregiver and Public Engagement</td>
</tr>
<tr>
<td>Patient engagement officer</td>
<td>Health economist</td>
</tr>
<tr>
<td>Qualitative research officer</td>
<td>Health economist</td>
</tr>
<tr>
<td>Manager, Health Economics</td>
<td>Manager, Economic Evaluations</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Research information specialist</td>
<td>Medical librarian</td>
</tr>
<tr>
<td>Scientific advisor</td>
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</table>
CADTH/HQO Collaboration

Determining Which HTA Components Will Be Conducted

- Benefits & Harms
- Economic Impact
- Ethics
- Legal
- Patient Preferences
- Clinical Context/Need
- Environmental Impact
- Implementation
## CADTH/HQO Collaboration

### CADTH’s Perspective (CADTH leading)

#### Examples of Collaboration

<table>
<thead>
<tr>
<th>Area</th>
<th>Activities</th>
</tr>
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<tbody>
<tr>
<td><strong>Clinical Review</strong></td>
<td>• Act as second reviewer during data extraction and verification, and also for the quality assessment of included studies from the clinical evidence review (HQO)</td>
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<td><strong>Economic Evaluation</strong></td>
<td>• Peer-review HQO’s economic project plan (CADTH)</td>
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<td>• Perform technical review of HQO’s budget impact analysis (CADTH)</td>
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<td>• Peer-review the economic model (HQO)</td>
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<td>• Validate and test the economic model (HQO)</td>
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<tr>
<td><strong>Patient Preferences and Experiences Review</strong></td>
<td>• Provide feedback and advise on CADTH patient engagement plan (HQO)</td>
</tr>
<tr>
<td><strong>Literature Reviews and External Feedback</strong></td>
<td>• Develop literature search strategy and conduct literature searches (CADTH)</td>
</tr>
<tr>
<td></td>
<td>• Act as a peer reviewer of literature search strategies (HQO)</td>
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<td></td>
<td>• Post links to the CADTH website during the feedback phase for the draft HTA (HQO)</td>
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## CADTH/HQO Collaboration

### CADTH’s Perspective (HQO leading)

#### Examples of Collaboration

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| Economic Evaluation | • Peer-review HQO’s Economic Project Plan (HQO)  
• Perform technical review of HQO’s budget impact analysis (HQO)  
• Peer review the economic model (CADTH)  
• Validate and test of economic model (CADTH) |
| Patient Preferences and Experiences Review | • Provide feedback and advise on HQO Patient Engagement plan (CADTH) |
| Literature Reviews and External Feedback | • Develop literature search strategy and conduct literature searches (HQO for clinical and eco; CADTH for qualitative)  
• Acting as a peer reviewer of literature search strategies (CADTH)  
• Post links to the HQO website during the feedback phase for the draft HTA (CADTH) |
## CADTH/HQO Collaboration

### What Did We Do?

<table>
<thead>
<tr>
<th>Meetings</th>
<th>Purpose</th>
<th>Timing</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status update team meetings</td>
<td>Project owner and team to provide a project update and allow team members to discuss issues/concerns</td>
<td>Biweekly</td>
<td>section leads (primary reviewers) and project managers</td>
</tr>
<tr>
<td>Project management meetings</td>
<td>Discuss timelines, milestones, and process as project progresses</td>
<td>Biweekly</td>
<td>project owner, operations manager and project managers</td>
</tr>
<tr>
<td>Director/management meetings</td>
<td>Discuss decision-making</td>
<td>Monthly (if needed)</td>
<td>directors, operations manager, project owner, project managers</td>
</tr>
</tbody>
</table>
Now we are lined up!

CADTH/HQO Collaboration

Scoping & HTA Dev

Analysis

Production

Approvals

- Draft Protocol
- Approve Protocol
- Literature
- Literature Review & Analysis
- Draft Report
- Editing
- Ministry notification
- Public Comment
- HQO Board Approval

- HTERP Meeting #1
- Stakeholder feedback
- Draft Report & Editing
- HTERP Meeting #2
- Stakeholder feedback
- Draft Recommendations
- HTERP Meeting #3
- Stakeholder feedback
- Final Recommendations

HTERP Meeting #1

Draft Protocol

HTERP Meeting #2

Draft Recommendations

HTERP Meeting #3

Final Recommendations

Stakeholder feedback

Expert feedback

OHTAC Draft Recommendation

OHTAC Final Recommendation

OHTAC Final Recommendation

Now we are lined up!
## CADTH/HQO Collaboration

### Example: ICBT HTA Timelines

<table>
<thead>
<tr>
<th>Timeline</th>
<th>HQO</th>
<th>CADTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 14–15, 2018</td>
<td>HQO team presents findings to HTERP</td>
<td>HTERP meeting #1: Present final findings</td>
</tr>
<tr>
<td>June 29, 2018</td>
<td>OHTAC meeting #1: Present findings to OHTAC</td>
<td>CADTH team attends OHTAC via teleconference</td>
</tr>
<tr>
<td>Sept 11–12, 2018</td>
<td></td>
<td>HTERP meeting #2: Draft recommendations</td>
</tr>
<tr>
<td>October 2018</td>
<td>Post HTA for feedback</td>
<td>Post HTA for feedback</td>
</tr>
<tr>
<td>November 30, 2018</td>
<td>OHTAC meeting #2: Present public comments to finalize recommendation</td>
<td>CADTH team attends OHTAC via teleconference</td>
</tr>
<tr>
<td>December 4–5, 2018</td>
<td>HQO team presents final recommendation to HTERP</td>
<td>HTERP meeting #3: Final recommendations</td>
</tr>
<tr>
<td>January 2019</td>
<td>HQO board meeting</td>
<td></td>
</tr>
<tr>
<td>February 2019</td>
<td>Final posting</td>
<td>Final posting</td>
</tr>
</tbody>
</table>
# CADTH/HQO Collaboration

## Identified Risks Prior to Project Initiation

<table>
<thead>
<tr>
<th>Potential Risks</th>
<th>Phase/Category</th>
<th>Lead</th>
</tr>
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<tbody>
<tr>
<td>New working relationship</td>
<td>Scope, schedule, deliverables</td>
<td>HQO and CADTH directors and managers</td>
</tr>
<tr>
<td>Scheduling and timeline conflicts</td>
<td>Schedule</td>
<td>HQO project manager and senior business analyst</td>
</tr>
<tr>
<td>Aligning process (governance)</td>
<td>Process</td>
<td>HQO and CADTH directors and managers</td>
</tr>
<tr>
<td>Partnership and leadership challenges</td>
<td>Schedule, deliverables</td>
<td>HQO and CADTH directors and vice-presidents</td>
</tr>
</tbody>
</table>
CADTH/HQO Collaboration

• **Opportunities and Next Steps**
  • Develop a clear understanding between CADTH and HQO on:
    • Which HTAs should be collaborative?
    • Which parts of the process are essential for developing a product that meets the decision-making needs of each agency?
    • Is there value in greater integration?
  • Remain agile and flexible as partnership evolves
  • Build on successes and challenges from pilot projects
  • Ultimately, reduce duplication and improve efficiency of producing HTAs across Canada
Clinical overview
Clinical Review Processes

Scoping of topic

Define research question(s)

Draft clinical review plan (CRP)

Finalize CRP

Literature search

Register HTA on PROSPERO

Screening and selection of studies (1 reviewer)

Data extraction (1 reviewer)

Evidence synthesis (1 reviewer)

Critical appraisal using GRADE (1 reviewer)

Consultation with Ontario Ministry of Health and Long-Term Care

Consultation with Ontario clinical experts & manufacturers

Consultation with health economist colleagues
CADTH/HQO Collaboration

Scoping
- Literature Search
- Consultations with clinical experts
- Call for manufacturer input

Protocol Development
- Draft Protocol
- Internal Review by Clinical Research Manager, Scientific Advisors, Director HTA
- External Review by Clinical Expert Co-authors and Peer-Reviewers
- Post on PROSPERO and CADTH Website

Clinical Review
- List of included studies posted for feedback
- Draft 1
- Internal Review by Clinical Research Manager, Scientific Advisors, Director HTA
- External Review by Clinical Expert Co-authors and Peer-Reviewers
- Posted for Stakeholder Feedback
- Draft 2
- Internal Review
- Final Report
CADTH/HQO Collaboration

CADTH Clinical Systematic Review Methods

Peer reviewed, literature search
MEDLINE, Embase, Cochrane Central, CINAHL, and PubMed

Study selection
Predefined eligibility criteria
Double citation screening

Data extraction
Study and patient characteristics, outcome data, in duplicate

Quality appraisal
Validated tool, in duplicate

Data Analysis
Quantitative or Narrative Synthesis
CADTH/HHQO Collaboration

• **Advantages**
  - Opportunity for peer review of our plans/protocols
  - Opportunity to learn from colleagues
  - Reduce duplication and improve human resource efficiency
  - Opportunity to make connections with experts outside of Ontario
  - Harmonized statements provide a foundation for shared work
CADTH/HQO Collaboration

• Challenges

  • Differences in processes and timelines:
    • Protocols/plans, posting of list of included studies, public posting of HTA and commenting period
  • Logistics of double reviewing
  • More employees and experts involved:
    • Longer timelines may be needed
    • Logistics of project teams and meetings
CADTH/HQO Collaboration

• Opportunities

• Building upon the foundation laid out by the pan-Canadian harmonized statements we can work to synchronize our clinical methods, processes and timelines

• Continue sharing our work to improve systematic reviews and evidence syntheses of the clinical literature
Economic overview
Research & Development Phase

**Scoping phase**

**Is policy question about:**

- **i. Value for Money**
  - **Economic analysis**
  - **Lit search & Selection of Articles**
  - **A. Review of Existing Economic Evaluations**
    - Critically appraise articles
    - Gather data for model
    - Build
    - Validate
  - **B. De-novo Modelling**
    - Conceptualize clinical pathway
    - Validate conceptual model
    - Construct model
    - Analyze & get results
  - **C. Budgetary projections**
    - Gather data
    - Build
    - Analyze & get results
  - **Report**

- **ii. Affordability**
  - **Budget Impact Analysis**
CADTH/HQO Collaboration

• Ongoing projects
  • Internet CBT (HQO lead), Minimally Invasive Glaucoma Surgery (CADTH lead)

• Advantages
  • Effective collaboration results in:
    • Greater efficiency in HTA production
    • No duplication of economic analyses in a resource limited setting
  • External peer-review and/or peer support
  • Larger target audience and potentially stronger impact
  • Great opportunity for learning and development via the sharing of each other’s practices, perspectives and experiences
  • Leverage knowledge and skills across organizations and Canada
CADTH/HQO Collaboration

- Challenges
  - Economic analysis is context specific:
    - Setting/Perspective
      - e.g., Budget impact analysis: Ontario vs. Canadian
    - Comparators
  - Different timelines and processes:
    - Protocols/plans, public posting and commenting
  - More employees and experts involved:
    - Longer timelines may be needed
    - Project teams: who to include on emails and meetings
  - HTA findings evaluated by different committees (HTERP/OHTAC)
  - Potential differences in funding recommendations despite similar set of evidence
Opportunities and Next Steps

• Develop consistency on determining:
  • Which HTAs should be collaborative?
  • Which HTA components are required for decision making?
  • Is there value of greater integration?
• Harmonized statements provide a foundation in which to work
• Synchronize our economic methods, processes and timelines
• Remain agile and flexible as partnership evolves
• Build on successes and challenges from pilot projects
• Continue sharing our work to improve economic evaluations and the implementation of recommended technologies in Ontario and across Canada
• Ultimately, reduce duplication and improve efficiency of producing economic evidence to support decision making
Discussion and questions