Health Technology Assessment: A Comprehensive Framework for Evidence-Based Recommendations in Ontario

Ana Johnson, Ph.D.
Canada Research Chair in Health Policy

Queen’s University
Ontario Health Technology Assessment Committee - OHTAC

- Ministry of Health recognized need for a system to address uptake and diffusion of health technologies
- OHTAC developed in 2003
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- Nondrug health technologies

- OHTAC receives a request for a review of a health technology from potential purchasers, mostly hospitals or from the Ministry
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- Only health technologies approved by Health Canada are taken into consideration – funding; not funding; field evaluation

- 16 programs, treatments

- 81% uptake; 6% contrary
OHTAC believed that to consider economic, social, and ethical aspects within the recommendation process more fully, revision of the pre-existing decision process was required.
Ontario Health Technology Assessment Committee - OHTAC

• Decision Determinants Sub-Committee was convened in January 2007 to provide guidance to OHTAC

• Committee members: decision making experts, clinical epidemiologists, clinicians, health economists, policy makers, health services researchers
Decision Determinants Subcommittee

- Work guided by review of literature and discussions with key informants: evidence-based medicine, health economics, decision analysis, bioethics, health policy
Decision Determinants Subcommittee

- Literature
  What criteria used to make health technology recommendations?
  What methods used to evaluate health technologies (i.e., weights, ranking, rating)?
  What methodology used to synthesize criteria (i.e., process, rules, frameworks)?
Subcommittee drew on several key ideas: evidence based medicine, cost-effectiveness, Accountability of Reasonableness, and a deliberative process.
Subcommittee believed that scientific or context-free evidence must play a role in decision making.

Also recognized:
- Context sensitive evidence (e.g., cost-effectiveness, social surveys)
- Expert opinion
- Colloquial evidence
Recommendations

- Transparency & consistency
- 4 explicit criteria
- Fair & deliberative process
- Right to challenge
OHTAC’s Decision Process

**Criterion 1**
Overall Clinical Benefit
- Effectiveness
- Safety
- Burden of Illness
- Need

**Criterion 2**
Consistency with Social & Ethical values
- Societal Values
- Ethical Values

**Criterion 3**
Value for Money
- Economic Evaluation

**Criterion 4**
Health Systems Feasibility
- Economic Feasibility
- Organizational Feasibility

Evaluate the criteria through a deliberative process.

State recommendation and value judgments based on these criteria.
How to Put this all Together?
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning of Symbol</th>
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<tbody>
<tr>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
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# Evaluation of Criteria

<table>
<thead>
<tr>
<th>Decision Criterion</th>
<th>Rating</th>
<th>Evidence</th>
<th>Type of Evidence/ *Quality</th>
<th>Evidence Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Benefit</td>
<td></td>
<td>Effectiveness</td>
<td>RCTs/High</td>
<td>Significant decrease in mortality</td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td>Case Reports/LOW</td>
<td>Acceptable safety profile</td>
<td></td>
</tr>
<tr>
<td>Burden of Illness</td>
<td></td>
<td>MOHLTC database</td>
<td>High prevalence and incidence in ON</td>
<td></td>
</tr>
<tr>
<td>Need</td>
<td></td>
<td>No alternate treatment as per experts</td>
<td>No effective alternate treatment</td>
<td></td>
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Conclusion

- Development of an explicit framework for the recommendation of adoption of new health technologies
- Framework is currently being used by OHTAC – pilot testing
  - Feasibility
  - Acceptability
  - Perceived usefulness
MAS – OHTAC Decision Determinants Overview

**Phase 1: Vignette Preparation Phase**
- Identify Stakeholders
- Up to 4 Weeks

**Phase 2: Review Period Phase**
- 16 Weeks
- MAS
- Clinical Experts
- Opinion Leaders
- Industry

Seek public input on determining the appropriate outcomes to be assessed for effectiveness (go through decision criteria; consult key stakeholders)

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**Phase 3: Recommendation Development Phase**
- 14 Days
- OHTAC
- Medical Advisory
- Secretariat

Systematic Analyses prepared by MAS for presentation to OHTAC

Draft review based on criteria and pathway and draft recommendation: Approved by OHTAC through electronic circulation

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**Phase 4: Draft Analysis & Recommendations Phase**
- Consultation Period
- 21 Days
- Public Stakeholders

Seek public input by applying agreed upon engagement processes

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**Phase 5: Public Engagement Evaluation Phase**
- 12 Days
- Medical Advisory
- Secretariat

Review engagement output and determine if draft recommendation needs to return to OHTAC

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**Phase 6: Post Recommendation Phase**
- Open Ended
- Knowledge Transfer Strategies
- Appeal process

Publication of OHTAC recommendations in various forms – Web, Academic Journals, E-Bulletin

Recommendation open to appeal for 60 days

**Evidence-Based Process**

- OHTAC Presentation

| Vignette prepared by MAS for presentation and approval by OHTAC | Systematic Analyses prepared by MAS for presentation to OHTAC | Draft Analysis and draft recommendation: Approved by OHTAC through electronic circulation | Draft versions posted on website for 21 days | Notify stakeholders that input is sought | Review comments received and determine if item needs to return to OHTAC | Appeal Period following Posting |
## Definitions of Criteria

<table>
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<tr>
<th>Criteria</th>
<th>Definition</th>
<th>*Evidence</th>
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<tr>
<td>Overall Clinical Benefit</td>
<td>A measure of the net health benefit of using the technology to diagnose or manage a healthcare condition (e.g., heart failure) or health care related issue (e.g., infection control)</td>
<td>• Effectiveness • Safety • Burden of Illness • Need</td>
</tr>
<tr>
<td>Consistency with Societal/Ethical Values</td>
<td>A balanced judgement made after considering information on societal/ethical values</td>
<td>• Societal Values • Ethical Values</td>
</tr>
<tr>
<td>Value for Money</td>
<td>A measure of the net efficiency of the technology compared to available alternatives (no cut-off threshold)</td>
<td>• ICER, Cost-Utility, Acceptability Curves, Cost-consequence</td>
</tr>
<tr>
<td>Health Systems Feasibility</td>
<td>A measure of the ease with which the technology can be adopted into the ON system</td>
<td>• Economic Feasibility • Organizational Feasibility</td>
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