CANADIAN NETWORK FOR ENVIRONMENTAL SCANNING IN HEALTH

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Director Knowledge Translation, Alberta Health Services
On Behalf of CNESH
CADTH Symposium, April 7, 2014
WHAT IS CNESH?

- Started in May 2011.
- A Canadian collaborative network of organizations and individuals.
- Identifies and shares information on new and emerging health technologies to support health care decision making and the appropriate adoption and use of effective and safe health technologies.
MANDATE

➢ To identify information on new, emerging, or new applications of health technologies, and to share this information across Canada.

➢ To develop and promote methods for the identification, filtration and prioritization of new or emerging health technologies.
CNESH MEMBERS

- Ron Goree, Chair, Programs for Assessment of Technology in Health Research Institute (PATH), McMaster University
- Rosmin Esmail, Vice-Chair, Knowledge Translation, Research Innovation and Analytics Portfolio, Alberta Health Services
- Nelson Millar, Office of Pharmaceuticals Management Strategies, Health Canada
- Keith Keough, Healthcare Technology and Data Management, Eastern Health Region
- Ron Johnson, Materials Management, Eastern Health Region
- Cédric Jehanno, Institute national d’excellence on santé et services sociaux (INESSS)
- Janet Martin, Health Technology Assessment for the Evidence-based Perioperative Clinical Outcomes Research (EPICOR-HITEC)
- Diane Brideau-Laughlin, Health Technology Assessment, Horizon Health Network
- Gabriela Prada, Health Innovation, Policy and Evaluation, The Conference Board of Canada
- Davy Cheng, Department of Anesthesia and Perioperative Medicine, London Health Sciences Centre and St. Joseph’s Health Care
- Dagmara Chojecki, Institute for Health Economics
- Nina Buscemi, Health Technologies and Services Policy, Alberta Health (Observer)
- Andra Morrison, Environmental Scanning Officer, CADTH
WHAT SHOULD CNESH FOCUS ON?

- Fall 2012-Network members agreed to develop an annual top 10 list of new and emerging health technologies for Canada.

- Technologies that would be potential “game changers”.

- List would be useful to support Canadian health care decision makers (patient, provider and policy maker) and HTA producers.

- Support effective planning and decision making for introduction of new and innovative health technologies in the Canadian Health Care system.

- Sought advice at CADTH 2013 workshop
CADTH DEFINITION OF HEALTH TECHNOLOGY

- Drugs, including but not limited to, biologics, blood products, vaccines, and prescription and non-prescription medicines.

- Medical, dental, and surgical devices and procedures.

- Diagnostics, including but not limited to, laboratory tests, screening programs, and diagnostic imaging.

- Does not include:
  - Health human resources
  - Health system design
  - Scopes of practice unless specifically relating to a health technology
NEW AND EMERGING HEALTH TECHNOLOGIES

➢ ‘New’ refers to health technology that has been approved for clinical use for only a short time and is generally in the launch or early post-marketing stage of diffusion. Medical devices may be marketed but <10% diffused or localised to only a few centres.

➢ ‘Emerging’ refers to a health technology that has not yet been approved by the regulator for use but has potential for significant impact on the health care system. Pharmaceuticals will usually be in phase II or III clinical trials; medical devices will be within six to nine months of marketing.

➢ Emerging technologies could also include:
  ➢ an existing health technology being investigated for a **new** indication, or
  ➢ a health technology that is part of a group of developing technologies that, as a whole, may have an impact.
PROCESS

Nomination

Dissemination

Verification

Prioritization
Nominate a Technology

All applicants must complete and submit the CNESH online nomination form. The form requires sufficient information for the Prioritization Committee to be able to rank each submitted technology. The Committee prioritizes health technologies by comparing them to the standard of care based on the following criteria: patient population, survival, safety, effectiveness, quality of life, cost, and implementation issues.

Note: CNESH is not associated with any CADTH program.

The Top 25 innovative health technologies short-listed by the Prioritization Committee will be publicly accessible, as will the final Top 10 list of new and emerging health technologies selected by the Prioritization Committee. This will include some of the information provided in the nomination form.

The purpose of the CNESH Top 10 list is not to promote company products. Only generic terms will be used to describe nominated technologies.

Fields marked with an asterisk (*) are required fields.

Nominator Information

Name of nominator *
Position of nominator *
Name of company/organization/department *
Date nomination submitted *

01. Contact details of nominator

Email *
Telephone *
Mailing address/Street *
CNESHM Top 10 New & Emerging Health Technologies Watch List 2014 - Process algorithm

**Top 10’s process algorithm**

- Nomination form received
  - N = 80
  - 5 techs excluded: multi indications or duplicates

- Verification phase
  - By: PATH institute, CADTH
  - Light literature search to complete data: provider on clinical population, patient survival, safety, effectiveness, QOL, up front and ongoing costs, and feasibility of implementation
  - Suggestion of a rating regarding the available data

- Nomination form verified
  - N = 75
  - 28 techs passed the first step of the prioritization phase
  - 44 techs have not been included in the next step:
    - Not new or emerging tech (too early or too late)
    - Not enough data available
    - Not answering an unmet need
    - Incremental innovation

- Prioritization Phase - step 1
  - By: CNESHM committee
  - CNESHM prioritization committee
    - Analysis based on criteria: population, patient survival, safety, effectiveness, QOL, up front and ongoing costs, and feasibility of implementation
    - Not multiple-criteria decision analysis, each criteria has the same weight
    - Comparison of the rating given by nominator and the rating suggested by the available data

- Top 28 of new and emerging technologies
  - Based on experts opinion and criteria analysis, 18 techs have shown to be more innovative than the others
  - Among the 10 techs selected:
    - 3 are in the cardiology disease area
    - 3 in oncology
    - 1 in infectious disease
    - 1 in ophthalmology
    - 1 in ENT
    - 3 are drugs

- Prioritization Phase - step 2
  - By: Extended CNESHM committee (CNESHM committee + experts)
  - CNESHM extended prioritization committee
    - Techs were grouped by disease area
    - Consultation of experts opinion
    - Some analysis process than step 1 but weighted by experts opinions

- Top 10 of new and emerging technologies
  - Dissemination phase
    - By: PATH institute, CADTH, CNESHM’s member
    - Preparation of document with one-pagers on each of the top 10 techs with information on 4 subjects: who might benefit from the tech, the current practice, what’s new in the tech, and the potential advantages
    - Promotion of the Top 10 watch list 2014
    - Official launch during the 2014 CADTH symposium

**Top 10 New and Emerging Technologies Watch List: 2014 Top 10 list**
<table>
<thead>
<tr>
<th>CRITERIA – CNESH TOP 10 LIST OF NEW TECHNOLOGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the <strong>size</strong> of the Canadian patient population who might use this technology per year?</td>
</tr>
<tr>
<td>Compared with the standard of care for treating patients in situations where this technology would be used, what is the expected impact of this technology on <strong>patient survival</strong>?</td>
</tr>
<tr>
<td>Compared with the standard of care for treating patients in situations where this technology would be used, what is the expected <strong>safety</strong> impact of this technology?</td>
</tr>
<tr>
<td>Compared with the standard of care for treating patients in situations where this technology would be used, how <strong>effective</strong> is this technology in standard measures of effectiveness for this disease area?</td>
</tr>
<tr>
<td>Compared with the standard of care for treating patients in situations where this technology would be used, what is the expected impact of this technology on <strong>patient quality of life (QoL)</strong> independent of the impact on patient survival?</td>
</tr>
<tr>
<td>Compared with the standard of care for treating patients where this technology would be used, what are the relative <strong>up front capital, training, and infrastructural costs</strong> of this technology?</td>
</tr>
<tr>
<td>Compared with the standard of care for treating patients where this technology would be used, what are the relative <strong>ongoing (operational) annual health care costs</strong> of this technology?</td>
</tr>
<tr>
<td>Compared with the standard of care for treating patients where this technology would be used, what is the expected <strong>feasibility of implementing</strong> this technology?</td>
</tr>
</tbody>
</table>
## Level Scoring

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>LEVELS SCALE USED</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of Population</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;1,000,000</td>
<td>+2</td>
<td></td>
</tr>
<tr>
<td>500,000-999,999</td>
<td>+1</td>
<td></td>
</tr>
<tr>
<td>100,000-499,999</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>50,000-99,999</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>&lt;50,000</td>
<td>-2</td>
<td></td>
</tr>
<tr>
<td><strong>Survival (mortality)</strong></td>
<td>Significant improvement</td>
<td>+2</td>
</tr>
<tr>
<td>Safety</td>
<td>Minor/moderate improvement</td>
<td>+1</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>No difference</td>
<td>0</td>
</tr>
<tr>
<td>QOL</td>
<td>Minor/moderate worse</td>
<td>-1</td>
</tr>
<tr>
<td></td>
<td>Significantly worse</td>
<td>-2</td>
</tr>
<tr>
<td><strong>Up-front cost</strong></td>
<td>Significant less</td>
<td>+2</td>
</tr>
<tr>
<td>On-going cost</td>
<td>Minor/moderate less</td>
<td>+1</td>
</tr>
<tr>
<td>Implementation needs</td>
<td>No difference</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Minor/moderate more</td>
<td>-1</td>
</tr>
<tr>
<td></td>
<td>Significantly more</td>
<td>-2</td>
</tr>
</tbody>
</table>
KNOWLEDGE MANAGEMENT AND TRANSLATION PLAN

- Plan developed to disseminate to key stakeholders (solicit nominations, top 10 list and final product)

- Website and online form development

- CADTH E-alert system, CNESH tweets on CADTH@CADTH_ACMTS, electronic flyer, emails, press releases

- Launch at CADTH symposium, promotion, top 10 one pagers

- Still more to come…
The Canadian Network for Environmental Scanning in Health (CNESH)

What Is CNESH?
The Canadian Network for Environmental Scanning in Health (CNESH) was established in 2011. Its primary purpose is to identify and share information on new and emerging health technologies — an activity known as horizon scanning.

This information can be used to support health care decision-making and prioritize further research. It may also help to facilitate the appropriate adoption and use of effective and safe health technologies.

CNESH's mandate and responsibilities

Our Main Initiative: A CNESH Top 10 List of Game-Changing Health Technologies

The purpose of the CNESH top 10 list is to identify new and emerging health technologies that may have the potential to transform the delivery of health care through their impact on clinical effectiveness, patient survival, quality of life, patient safety, or costs to the health care system.

The top 10 list will include drugs, diagnostics, devices, and procedures that are soon to be launched, are recently approved, or are in the early stages of diffusion.

CNESH aims to inform health-related decision-makers about potentially promising new and emerging health technologies. The technologies selected for the top 10 list will not have been comprehensively assessed for safety, efficacy, quality, and cost-effectiveness. The evaluation will have solely been based on a limited assessment of data and information provided by nominators, as well as a limited literature search of publicly assessable information.

http://www.cadth.ca/en/products/environmental-scanning/overview/cnesh
HOW WILL THE LIST HELP YOU?

- **Decision-makers**
  - Set priorities and plan for the future
  - Be informed about implications of new and emerging technologies
  - Better meet existing and emerging health challenges
  - Become aware of new and emerging technologies

- **Health technology assessment (HTA)**
  - Inform HTA agendas and topic prioritization
  - Develop new methodologies for identifying, prioritizing, and evaluating the "promise" of new and emerging technologies.
  - The top 10 list may also help to facilitate the appropriate adoption and use of new and emerging technologies
HOW WILL THE LIST HELP YOU?

- **Health care providers**
  - To help facilitate appropriate adoption and use
  - Highlights potential risk and benefits of new treatment options

- **Patients**
  - Identify how new and emerging technologies might change existing care
  - Provide information on the potential benefits and harms
NEW AND EMERGING HEALTH TECHNOLOGIES

WATCH LIST: 2014
NEW AND EMERGING HEALTH TECHNOLOGIES
WATCH LIST: 2014

Antimicrobial copper surfaces
to reduce hospital acquired infections in intensive care settings
Ex-vivo lung perfusion device
to preserve and assess donor lungs prior to transplant
Ipilimumab for unresectable or metastatic melanoma
Mitral valve clip for degenerative mitral regurgitation
Obinutuzumab (plus chlorambucil) for newly diagnosed chronic lymphocytic leukemia
Remote ischemic conditioning (RIC) device to prevent cardiac ischemia and infarction in patients undergoing cardiac surgery
Retinal implant to improve vision in patients with retinitis pigmentosa
Self-expanding, drug coated, stent for the treatment of peripheral arterial disease
Trastuzumab emtansine for HER2-positive metastatic breast cancer
Tympanostomy tube insertion delivery system for children with chronic ear infections
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Come visit our table for more information!