Translating Science into Policy and Practice

Instructor:
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Institute for Knowledge Mobilization™

Organization:
Field Services Training and Response
Health Security Infrastructure Branch, Public Health Agency of Canada

Location:
Albert at Bay Suite Hotel, Ottawa,

Slides Available:
http://www.knowledgemobilization.net/phac
Password: Public
Introductions

Hello

Let’s find out a little about each other.
A short personal introduction...
What do hope to gain today?
Any major concerns?
Workshop Objectives

After completion of the course you will be able:

• To understand the core skills of knowledge translation.
• To understand how to collaborate to build user considerations into your research.
• To understand how to develop research-use strategies & plain language communication products to position your findings for greatest impact.
• To understand how to move beyond the “publish or perish” cycle.
• To understand how dialogue & feedback ensure research remains relevant.
• To understand how to better filter noise from signal.
• To understand how to assess your knowledge environment(s).
• To understand how to perform basic monitoring of knowledge translation activities.
Workshop Format

• Lectures
• Group work
• Case studies
• Self-assessment
• Facilitated discussion
Workshop Agenda

Morning May 1:

• Introductions, objectives, and expectations
  – Overall expectations for the course and general housekeeping

• What is knowledge translation and why is it important
  – Overview of the history of translating science into policy and practice and why it is important to creating new value from implementation

• Activity
  – Activity on critical thinking to get participants warmed up before the core session starts

• Foundation of knowledge translation practices and principles
  – Basic models and methods currently used in population health and affiliated areas of study and practice

• Challenges of putting models into practice
  – Discussion of the barriers to knowledge translation in public health and organizational and cultural shifts required to succeed
Workshop Agenda

Afternoon May 1:

• Creating and implementing research use strategies
  – Self-assessment exercise of applying basic principles in the development
    of strategies for research use

• Group discussion: applying models to PHAC scenarios, with discussion of tools, methods, strengths and
  weaknesses of various approaches
  – Analysis of 5 scenarios: Post Outbreak Policy Change, Food Policy, Health
    Inspection, Public Health Laboratory, STI Contact Tracing

• Plain language and plain communication methods
  – Understanding how plain language and plain communication methods can
    lower implementation costs
Workshop Agenda

Morning May 2:

• Knowledge Brokers
  – Case studies of the use of knowledge brokers in comparable science based areas of work and how they assist with monitoring implementation

• Communities of Practice
  – Examination of how communities of practice build capacity for translating science into policy and practice, maintain the organizational knowledge base, and speeds up onboarding of new team members

• Learning and improving from history
  – Applying knowledge translation concepts and methods to two historical cases: Maple Leaf Foods, XL Foods
Workshop Agenda

Afternoon May 2:

• Knowledge Environments
  – Visualizing your knowledge environments to gain a better understanding of flow and relationships

• Complexity and Networks
  – How to gain access to knowledge and skills outside of public health to enhance current and future ST plans and activities

• Resources and ongoing professional development
  – Overview of Canadian and International resources to continue professional development and improve skills
Alice came to a fork in the road. *Which road do I take?* she asked. *Where do you want to go?* responded the Cheshire Cat. *I don't know,* Alice answered. Then, said the Cat, *it doesn't matter.*

— Lewis Carroll, *Alice in Wonderland*
How do you take science from research to practice?
Busy world

• Take a deep breath.
• Think about your work.
• What is your relationship with data, information, and knowledge?
• What does it look like?
Does it look like this?

http://www.sohotastic.com/
Or more like this?

http://www.spareroom.co.nz/2006/07/24/i-have-it-right-here//
Or even like this?

What about Research? (e.g. geology)


1945 - Hubert laments the fragmented, overblown state of geology

1965 - 1964 - Plate tectonics conferences

1970, 1971, 1972 - Apollo lunar missions


Horizontal Scale
500 Articles

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...what do we mean by Research?

Research optimizes Search

Re/Search
Data, Info, Knowledge?


May 1-2, 2014

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Data and information overload

More data generated in next 4 years than in the history of the world

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More data generated in next 4 years than in the history of the world

INFORMATION OVERLOAD

People are connected up to 12 hours a day to:

- Social Media users generating data at an exponential rate
- Amount of information is unique: 25%

Machine Data Transfer Rate
2 million bits per second

Human Absorption Rate
126 Bits per second
Rate humans can listen 40 Bits per second

29 hours
A lifetime of learning can be transferred over the Internet.

AMOUNT OF DATA IN 2010
01010010101101010101 1.2 zettabytes

AMOUNT OF DATA IN 2020
01010010101101010101 35 zettabytes

Internet Audience | unique visitors

Worldwide: >1 billion

Asia: 400 million

LIMITED INFORMATION INTAKE
Time constraints: 24 hours a day = 1,441 minutes a day
The Machine is Us/ing Us

http://www.youtube.com/watch?v=NLlGopyXT_g

...this contraption useful and productive? When we post and then tag pictures on the names to images. The thickening links be 100 billion times per day humans click important. Each time we forge a link between a link each fact in an article to a reference d in blue as ideas are cross-referenced. I remember. It is how neural nets answer questions and acquire a higher level of knowledge.
Data, Information and Knowledge

http://visualmapper.blogspot.com/2010/05/data-information-knowledge-process.html
Data is:

• Data is raw material for processing.
• Data relates to fact, event and transactions.

• What role does data play in your daily work?
Information is:

• Information is data that has been processed in such a way as to be meaningful to the person who receives it.
• Information is any thing that is communicated – IT IS INFORMATIVE.

• **What role does information in your daily work?**
Knowledge is:

• Knowledge is result of perception and learning and reasoning.
• Knowledge is social.
• Knowledge requires relationships.

• What role does knowledge in your daily work?
...what do we mean by Knowledge?
What is Knowledge?

• **Knowledge**: A fluid mix of framed experience, values, contextual information, evidence interpretation and expert insight that provides a framework for decision making, evaluating and incorporating new experiences and information. It may be explicit or tacit, and individual or collective. In organizations, it often becomes embedded not only in documents or repositories, but also in organizational routines, processes, practices, and norms.

What is Evidence?

- **Evidence** includes the best research and evaluation information available based on a systematic analysis of the effectiveness of an intervention, strategy or service and its use, in order to produce the best outcome, result or effect. Evidence may be generated from a range of rigorously implemented and appropriate quantitative and/or qualitative research and evaluation methodologies.

History of Data and Information Sharing

3500 BCE
• Cuneiform language invented

200 BCE
• Parchment now available

1450
• Johannes Gutenberg brings functional moveable type to Europe

1858
• Trans-Atlantic telegraph

1950s
• Computers and Knowledge Management emerge
History of Knowledge Translation

Passive push (until 1970s+)
- Dissemination via traditional journals, conferences

Push harder (1990s+)
- Focus on implementation, e.g. performance feedback

Partner & pull (2000+)
- Linkage & exchange, e.g. joint production
Knowledge Translation as a Value Chain

What: Data, Information, Description, Stories

So What: Meaning, Analysis, Interpretation

Now What: Decisions, Directions, Actions

Incentives to Share between Levels

Supporting Infrastructure

Innovation

Programs
Policies
Priorities
Processes
Practice

Products
Perspectives
Procedures
Possibilities
People Skills

MULTIPLE INPUTS FROM RESEARCH, PRACTICE, EXPERIENCE, CULTURE
Taking in traumatic information and transforming it into life-affirming action may turn out to be the most advanced and meaningful spiritual practice of our time.

http://globalpublicmedia.com/how_do_you_like_theCollapse_so_far
The noosphere is the third in a succession of phases of development of the Earth, after the geosphere (inanimate matter) and the biosphere (biological life).

The term Noöcene epoch refers to "how we manage and adapt to the immense amount of knowledge we’ve created.”

Evolution is 'creative' and cannot necessarily be explained solely by Darwinian natural selection.
Defining Knowledge Translation: Example 1

“Knowledge transfer and exchange is collaborative problem-solving between researchers and decision-makers.”

--Canadian Health Services Research Foundation
Defining Knowledge Translation: Example 2, part 1

“Knowledge translation (KT) is defined as a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system.”

--Canadian Institutes of Health Research
Defining Knowledge Translation: Example 2, part 2

“This process takes place within a complex system of interactions between researchers and knowledge users which may vary in intensity, complexity and level of engagement depending on the nature of the research and the findings as well as the needs of the particular knowledge user.”

--Canadian Institutes of Health Research
Defining Knowledge Translation: Example 3

• Simply put, KT is about the work we do to move knowledge into action.
• A KT product or activity is created to actively and effectively share useful knowledge with your audience.

--Public Health Agency of Canada: Knowledge Translation (KT) Planning Primer
Defining knowledge translation

Sharon E. Straus MD MSc, Jacqueline Tetroe MA, Ian Graham PhD

Many terms have been used to describe the process of putting knowledge into action. In their work to create a search filter for knowledge translation, McKibbon and colleagues have so far identified more than 90 terms for use of research (Dr. Ann McKibbon, McMaster University: unpublished data, 2009).

Key points
- Gaps between evidence and decision-making occur at all levels of health care, including those of patients, health care professionals and policy-makers.
- Knowledge translation involves using high-quality knowledge in processes of decision-making.
- The knowledge-to-action framework provides a model for the promotion of the application of research and the process of knowledge translation.

Knowledge creation (i.e., primary research), knowledge distillation (i.e., the creation of systematic reviews and guidelines) and knowledge dissemination (i.e., appearances in journals and presentations) are not enough on their own to ensure the use of knowledge in decision-making.

We should also clarify what knowledge translation isn’t. Some organizations may use the term synonymously with commercialization or technology transfer. But this use does not take into consideration the various stakeholders involved (including patients, health care providers and policy-makers) or the actual process of using knowledge in decision-making. Similarly, some confusion arises around the definition of continuing education versus that of knowledge translation. Educational interventions (e.g., audit and feedback, journal clubs) are a strategy for implementing knowledge. But the audience
Why Bother?

• Brainstorm the various reasons why we should build the practice of Knowledge Translation into our work, whether as researchers, knowledge brokers, policymakers, managers, practitioners, investors, etc..
Importance to PHAC Context

- Need for improved linkages between the creation of knowledge and informed decisions in policy & practice.
- One of PHAC’s key functions – reason underlying the creation of the Agency, central theme in PHAC Strategic Plan.
- Large amount of information, but insufficient:
  - Overall synthesis to support action
  - Dissemination/exchange
  - Uptake by decision makers
- Recognition in Canada and elsewhere for the need for enhanced knowledge exchange capacity and activities to support evidence generation and use.
Importance to public health and chronic disease

• Knowledge exchange provides an opportunity to take what we know, give it value and put it to use to address public health issues

• Examples:
  – Knowledge of the risks associated with smoking have led in part to a decline in smoking rates
  – Knowledge of the brain has led in part to advances in treatment of mental disorders
  – Knowledge of vaccines and disease control has led in part to the eradication of smallpox
Strategic Objective 2: To ensure actions are supported by integrated information and knowledge functions.
Win a Fabulous Prize!

• Please select ONE of these two gift cards as your prize.
• Put your name and your selection on piece of paper.
• I will randomly pick one.
• (Note: one prize is FREE, while the other prize costs some money.)
Evidence-informed decision making and practice: Why we do KT?

• Evidence-informed practice: Practice that is attentive to evidence, including research, experiential knowledge of the organization, cultural context, and educational, symbolic/political and process uses, and that uses knowledge syntheses of summarized findings to inform practice, decision-making and implementation.


• Evidence-based largely relates to only one type of evidence—research. “Evidence-influenced” or “evidence-informed” reflects the need to be context sensitive and consider use of the best available evidence when dealing with everyday circumstances. A variety of types and sources of evidence and knowledge inform policy and practice.

The Challenge of Public Health Knowledge Translation

Here are a couple of examples in public health that highlight the challenge and importance of effective knowledge to action or knowledge translation.

As we will see it does not happen naturally...
Scurvy: a knowledge exchange case study

Deaths

1497
Vasco da Gama sails around Cape of Good Hope (crew: 160, 62.5% death rate)

1601
Cpt. J. Lancaster’s trip from England to India. Experiments with lemon juice. (crew: 248, 39.6% death rate)

1747
Navy physician J. Lind completes successful random trial of 6 treatments for sailors

1865
British Board of Trade establishes citrus-enriched diet on marine merchant vessels

(Donald M. Berwick, JAMA. 2003;289:1969-1975)
Decisions are a complex calculus

Philip Davies, Is Evidence-Based Government Possible?
Jerry Lee Lecture 2004, Washington, DC

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Knowledge Cycle Framework

Canadian Best Practices Initiative, 2009
CIHR Knowledge to Action Model
SECI Model


http://www.internettime.com/category/informal-learning/
Ottawa Model of Research Use

Assess barriers and supports

- Evidence-based innovation
  - development process
  - innovation attributes

- Potential adopters
  - awareness
  - attitudes
  - knowledge/skill
  - concerns
  - current practice

- Practice environment
  - patients
  - culture/social
  - structural
  - economic
  - uncontrolled events

Monitor intervention and degree of use

- Implementation intervention strategies
  - barrier management
  - transfer
  - follow-up

Evaluate outcomes

- Adoption
  - intention
  - use

- Outcomes
  - patient
  - practitioner
  - system

http://www.nccmt.ca/registry/view/eng/65.html
Promoting Action on Research Implementation in Health Services (PARIHS)

http://www.nccmt.ca/registry/view/eng/85.html
Knowledge Translation Planning Template©

INSTRUCTIONS: This template was designed to assist with the development of Knowledge Translation (KT) plans for research but can be used to plan for non-research projects. The Knowledge Translation Planning Template is universally applicable to areas beyond health. Begin with box #1 and work through to box #13 to address the essential components of the KT planning process.

<table>
<thead>
<tr>
<th>(1) Project Partners</th>
<th>(2) Degree of Partner Engagement</th>
<th>(3) Partner(s) Roles</th>
<th>(4) KT Expertise on Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>researchers</td>
<td>from idea formulation straight through</td>
<td>(1) What do the partner(s) bring to the project?</td>
<td></td>
</tr>
<tr>
<td>consumers - patients/families</td>
<td>after idea formulation &amp; straight through</td>
<td>(2) How will partner(s) assist with developing, implementing or evaluating the KT plan?</td>
<td></td>
</tr>
<tr>
<td>the public</td>
<td>at point of dissemination &amp; project end</td>
<td>Consider: Not all partners will be engaged at the same point in time. Some will be collaborators, end users or audiences, or people hired to do specific activities.</td>
<td></td>
</tr>
<tr>
<td>decision makers</td>
<td>beyond the project</td>
<td>Action: Capture their specific roles in letters of support to funders, if requested.</td>
<td></td>
</tr>
<tr>
<td>private sector/industry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>research funding body</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>volunteer health sector/NGO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>practitioners</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>scientist(s) with KT expertise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>consultant with KT expertise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge broker/specialist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KT supports within the organization(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KT supports within partner organization(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KT supports hired for specific task(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### (5) Knowledge Users (KUs)

**Which KUs or audiences will you target?**
- researchers
- health practitioners or service providers
- public
- media
- patients/consumers
- decision makers
- policy makers
- private sector/industry
- research funders
- venture capitalists
- volunteer health sector/NGO
- other: specify ▶ ____________

**Consider:** Have you included any of your audiences on your research team? If so, who and why (be strategic)?

### (6) Main Messages

**What did you learn, or what do you anticipate learning?**

**What messages do you anticipate sharing (up to 3 KU audiences can be included on this form)?**

**Audience 1**

**Audience 2**

**Audience 3**

OR

- No idea yet; messages will emerge during research through collaboration with partners.

**Consider:** What can you feasibly do within this project, given time and resources? Aim for defining your Single Most Important Thing (SMIT) or Bottom Line Actionable Message (BLAM).

### (7) KT Goals

**What are your KT Goals for each KU/audience?**

<table>
<thead>
<tr>
<th>Audiences</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generate...</td>
<td>awareness</td>
<td>interest</td>
<td>practice change</td>
</tr>
<tr>
<td></td>
<td>behaviour change</td>
<td>policy action</td>
<td></td>
</tr>
<tr>
<td>Impart...</td>
<td>knowledge</td>
<td>tools</td>
<td></td>
</tr>
<tr>
<td>Inform...</td>
<td>research</td>
<td>product</td>
<td></td>
</tr>
<tr>
<td></td>
<td>patent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>other ▶ ____________</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Consider:** KT is applicable to all research; even single studies are shared via journal articles. However, intent to change practice, behaviour or policy must be supported by a body of high quality research evidence (synthesis). Always consider legal and ethical principles in your KT efforts.

### (8) KT Strategy(s)

**What KT strategy(s) will you use?**

<table>
<thead>
<tr>
<th>Audiences</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly Effective 1</td>
<td>interactive small group</td>
<td>educational outreach</td>
<td>reminders</td>
</tr>
<tr>
<td></td>
<td>IT decision support</td>
<td>multi-prof collaboration</td>
<td>mass media campaign</td>
</tr>
<tr>
<td>Mixed Effects 3</td>
<td>financial incentive</td>
<td>combined interventions</td>
<td></td>
</tr>
<tr>
<td>Limited Effects 1</td>
<td>conferences (didactic)</td>
<td>opinion leaders</td>
<td>champions</td>
</tr>
<tr>
<td></td>
<td>educational materials</td>
<td>patient-mediated interview</td>
<td>performance feedback</td>
</tr>
<tr>
<td></td>
<td>substitution of tasks</td>
<td>peer reviewed publication</td>
<td></td>
</tr>
<tr>
<td>Effects Unsupported by Synthesis 2</td>
<td>press release</td>
<td>patent license</td>
<td>arts-based KT</td>
</tr>
<tr>
<td></td>
<td>social media</td>
<td>networks</td>
<td>communities of practice</td>
</tr>
<tr>
<td></td>
<td>Café Scientifique</td>
<td>webinar</td>
<td>other ▶ ____________</td>
</tr>
</tbody>
</table>

**Consider:** Multifaceted/combined KT strategies are more effective than single strategies.

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**When will KT occur?**
- [ ] integrated iKT - researchers and research users will collaborate to shape the research process, e.g., setting the research questions, deciding the methodology, involvement in data collection and tools development, interpretation of findings and dissemination of research results
- [ ] end of grant KT - KT undertaken at the completion of the research process
- [ ] both

Comment on the specifics of your KT procedures; describe how you are using iKT:

---

**Where do you want to have an impact?**
- [ ] healthcare/well-being outcomes
- [ ] (clinical) practice
- [ ] policies/systems
- [ ] research & knowledge

**How will you know if you achieved your KT goal(s)? Consider:**
- [ ] reach indicators (# distributed, # requested, # downloads/hits, media exposure)
- [ ] usefulness indicators (read/browsed, satisfied with, usefulness of, gained knowledge, changed views)
- [ ] use indicators (# intend to use, # adapting the information, # using to inform policy/advocacy/enhance programs, training, education, or research, # using to improve practice or performance)
- [ ] partnership/collaboration indicators (# products/services developed or disseminated with partners, # or type capacity building efforts, social network growth, influences, collaborativeness)
- [ ] practice change indicators (intent or commitment to change, observed change, reported change)
- [ ] program or service indicators (outcome data, documentation, feedback, process measures)
- [ ] policy indicators (documentation, feedback, process measures)
- [ ] knowledge change (quantitative & qualitative measures)
- [ ] attitude change (quantitative & qualitative measures)
- [ ] systems change (quantitative & qualitative measures)

---

**Guiding Questions for Evaluation**

1. What internal/external factors do you need to consider? Where is the energy for this work? How have similar initiatives been evaluated in the past? (link this to partners, KUs)
2. Who values the evaluation of this initiative? What are they saying they need from this evaluation? (link this to partners, KUs)
3. Why are you evaluating? For program growth or improvement; accountability? Sustainability? Knowledge generation? (e.g., to know if the KT strategy met the objectives)
4. How will literature or existing theories inform you evaluate the initiative?
5. Which questions/objectives are critical? (link this to KT goals, process, impact)
6. Will you focus on process or outcome information? What are your pre-determined outcomes? How will you capture emergent outcomes?
7. Does this information already exist in your system? (link to methods, process, impact)
8. What perspective or skill set do you need to help you reach your evaluation objectives? (link to partners, KUs)
9. How do your stakeholders wish to receive this information so that it will be valuable and useful to them? How will you engage them throughout? (link to partners, KUs)
WORKSHEET

This sample worksheet is available in a fillable Microsoft Word format.

KNOWLEDGE TRANSLATION (KT) PLANNING PRIMER

Worksheet:

Complete a separate fillable worksheet for each audience.

WHO: Who will you reach?
WHY: What are your KT objectives?
WHAT: What is the message?
HOW: Choose the format.
HOW: Choose the delivery.
HOW: Identify the opportunities.
HOW: Know the barriers.
HOW: Assess the resources.
IMPACT: Assess the impact.
IMPACT: Revise as needed.

DATE:
COMPLETED BY:
APPENDIX 2.2 EXPOSURE AND INTERACTION REQUIRED BY DIFFERENT KNOWLEDGE TRANSLATION APPROACHES

Translation Approaches
- Publication
- Conference / Presentation
- Training Session / Workshop
- Meetings / Roundtables
- Collaborative Practices

Interactions
- No interaction
- Minimal interaction & structure
- More structured exchange
- Interactive exchange but brief exchanges
- Interactive exchange that is continuous

Translated and adapted from: INSPQ. Animer un processus de transfert des connaissances. 2009
Want Research to be used: Begin with the End Game

- Adopt a “user-centered approach”: begin with the priorities of those you hope will translate your research into action
- solve their problems

- Role of knowledge broker to facilitate this process
Assessing Current Effectiveness

- Conduct an informal baseline assessment of your organization’s current effectiveness in knowledge exchange

(See Handout # 1)
4 Common Obstacles to Research Use:

1. The research question is not pertinent to practice.

2. The research is not timely.

3. The research is not communicated in ways relevant to users.

4. Management pressures trump the use of research-based evidence in decision-making.

Discussion: Where does Strategy fit?

- Vision
- Mission
- Goals
- Strategy
- Tactics
- Outputs
- Outcomes
- Impacts
Discussion: What does strategy look like?

Strategic Plan
Major Components

Why we exist
What we want to be
What we must achieve for success

Specific intentions expressed in measurable terms to achieve Goals
Planned actions to achieve Objectives
Measures and Indicators of success of Activities
Desired level of performance for Measures
Discussion: Public Health Agency of Canada?

PHAC Strategic Plan: 2007-2012

**INFORMATION** + **KNOWLEDGE** → **ACTION**

**VISION**
Healthy Canadians and communities in a healthier world

**MISSION**
To promote and protect the health of Canadians through leadership, partnership, innovation, and action in public health

**OBJECTIVES**
- To anticipate and respond to the health needs of Canadians.
- To ensure actions are supported by integrated information and knowledge functions.
- To further develop PHAC’s dedicated, professional workforce by providing it with the tools and leadership it needs and by ensuring a supportive culture.

**SHARE PUBLIC HEALTH FUNCTIONS**
- Population Health Assessment
- Health Surveillance
- Health Promotion
- Disease and Injury Prevention
- Health Protection
- Public Health Emerging Preparations and Response

**OUTCOMES**
- Program Activity Architecture 07/08
  - Healthier Canadians and a stronger public health capacity
- Program Activity Architecture 08/09
  - Healthier Canadians, reduced health disparities, and a stronger public health capacity
What is a Strategic Thinking?

• The capacity to let go of today’s issues and place oneself into the future
  – What is the ideal future for yourself or your organization?
  – How to think “heads-up”?

• Letting go of today is difficult
  – Success is often tied to operational problem solving TODAY
  – Thinking “heads-down”

• Because many of us do not have opportunities to do it
  – We lack the comfort and skills with strategic thinking
  – We are uncomfortable with going too far forward – unpredictable

• Thinking 5-10-15-20 years out
  – Needed systems, education, infrastructure, etc.
  – Constant, ongoing process
  – Blueprint 2020
Why Thinking Skills are Important?

• Strategic planning requires:
  – Members of an organization to envision its future and to develop the necessary procedures and operations to achieve that future

• Strategic planning groups that are most adept at using a full range of thinking skills and applying them efficiently, achieve:
  – Better results
  – Develop more ownership
  – Have higher returns on investments of time and energy

• Most managers spend most of their time and energy putting out brush fires – operating tactically or short-term
  – They often have little training or experience in thinking or acting strategically
Scenario A – Post Outbreak Policy Change

Jess is a senior epidemiologist who has been part of a team working on a long and complex national food borne outbreak. The outbreak has been challenging and very political with a large number of players involved: Canadian Food Inspection Agency, Health Canada, the food handling industry for this particular product, provincial public health ministries, the National Microbiology Laboratory and many departments at the Public Health Agency of Canada.

The outbreak team has identified a novel source of infection during the outbreak. While the epidemiological evidence is strong, this is the first time this reservoir has been identified and there is still some scepticism about the food product as a reservoir and outright denial in some areas of the food industry.

The outbreak team has recommended a number of policy changes as a result of this outbreak, and the new evidence and risks identified. Key among them are changes to public health messaging to the public about the consumption of this product and industry food handling practices.

How can Jess and the team proceed to support policy change and protect the Canadian public against this newly identified risk?
Scenario B – Food Policy

Rob is a policy analyst at a provincial health ministry currently working on a cross-government healthy kids strategy to reduce childhood obesity. The strategy is garnering significant attention from citizens, MPs, the health sector and the food industry with plenty of mixed opinions from full endorsement to outward opposition claiming the government is moving towards creating a nanny state.

The part of the strategy aimed specifically at the food environment proposes two initiatives:

• Restrict the marketing of high-calorie, low nutrient foods, beverages and snacks to children under age 12
• Require all large chain restaurants, including fast food outlets and retail grocery stores that sell prepared foods, to list the calories in each item on their menus and to make this information visible on menu boards.

Rob and his team have been tasked to report back to the Minister with a detailed knowledge translation plan that is relevant to all stakeholders. What are some of the key elements Rob needs to include in the plan?
Scenarios

Scenario C – Health Inspection

Dolon is a member of the health protection division at her local public health unit. Her team has been working diligently to implement an enforcement plan for the new provincial legislation restricting anyone under the age of 18 from tanning indoors.

The *Skin Cancer Prevention Act* in addition to the age restriction also bans marketing indoor tanning services targeted at youth and requires tanning bed operators to ask anyone who looks under the age of 25 for identification. Education and enforcement by Public Health Inspectors from the health unit rolled out 2 months ago.

The health protection director has asked Dolon to work with an evaluator to develop an evaluation of the knowledge translation plan so the health unit can monitor how well they are communicating and educating the tanning bed operators and the public on this enforcement program. What are some indicators Dolon should identify that will measure impact?
Scenarios

Scenario D - Public Health Laboratory

Elsa is Public Health Laboratory Liaison Officer placed at a provincial laboratory in Canada. She has been tasked with assessing whether the provincial ministry of health should consider expansion and increased availability of HIV testing in the province and provide recommendations on how best to move forward.

Her findings suggest that expansion of HIV point of care testing services into rural and remote communities is the way to go. This will assist in the prevention of new HIV infections, the reduction of the number of individuals who are unaware of their HIV positive status as well as facilitate linkage of HIV positive individuals to appropriate care, treatment and support services.

What policy considerations and next steps will Elsa present to the ministry of health as they consider the benefits of implementing HIV point of care testing into rural and remote communities and what stakeholders would be identified as key partners in ensuring success?
Scenarios

Scenario E - STI Contact Tracing

Frederick works for a local public health unit which services Northern and remote communities as well as works closely with Northern Nursing Stations. The population of this region is made up of nearly 80% Aboriginal peoples.

In reviewing local rates of sexually transmitted infections and conducting social networking analysis, Frederick’s team reported a significant increase in rates over the last five years. After further exploring of the data and meetings with the Northern Nursing Stations in the region, it was identified that all identified cases were repeatedly infected with chlamydia over the last couple of years. In addition, the review indicated that cases were opting to conduct their own contact notification.

Frederick was tasked to provide recommendations on how to decrease repeat infections. Enhancement of partner notification was among several recommendations Frederick presented to his team. Linked to this recommendation, Frederick has suggested that the team investigate different forms of partner notification, including different combinations with electronic/internet-based contract notification as one of the methods.

What policy considerations might this local public health unit have to make with respect to electronic/internet-based contact notification. Please contemplate policy issues related to accessibility and abuse of tools, privacy of information and messaging.
Signal vs. Noise

Global Internet statistics:

- Email: 144.8 Billion Emails Are Sent Every Day (2012)
- Websites: 634 million (2013)
- Users: ~2.4 billion (2012)
- Tweets: +400 million tweets daily (2013)
- Facebook: 1.2 billion users (2013)
- YouTube: 1 trillion playbacks (2011)
- Flickr: 6 billion photos (2011)
Effective Key Messages are:

• Concise
• Limited
• User-focused
• In Context
• Action-able
Ineffective Key Messages:

• Use **jargon** or acronyms

• **Underestimate** the intelligence of an audience

• **Overwhelm** by providing too much information

• Use graphs, tables, flow charts, complex graphics
Effective Key Messages:

- Test your key messages
- Revise
- Test again
- Repeat
- Communicate actively and passively
- Update & improve over time
Communication is more than talk
Conversations are at the core
Sometimes we push, but...
Dissemination

• Scattering of seeds
• Spread widely
  – How do we prepare the soil to receive the seeds?
  – How do we nurture the growth of these seeds?
  – What does the harvest look like?
  – What happens in the marketplace?
Will a systematic review work at the street level?

Immigrant women’s experiences of postpartum depression in Canada: a protocol for systematic review using a narrative synthesis

Gina MA Higginbottom, Myfanwy Morgan, Joyce O’Maloney, Yvonne Chiu, Deb Kocay, Miranda Alexandre, Joan Forgeron and Marilyn Young

Abstract (provisional)

Background

Literature documents that immigrant women in Canada have a higher prevalence of postpartum depression symptomatology than Canadian-born women. There exists a need to synthesize information on the contextual factors and social determinants of health that influence immigrant women’s reception of mental health and behavior in accessing existing mental health services. Our research question is: What are the ethnoculturally defined patterns of help-seeking behaviors and decision-making and other predictive factors for therapeutic mental health care access and outcomes with respect to postpartum depression for immigrant women in Canada?

Methods

Our synthesis incorporates a systematic review using narrative synthesis of reports (peer- and non-peer reviewed) of empirical research and aims to provide stakeholders with perspectives on postpartum mental health care services as experienced by immigrant women. To reach this goal we are using integrated knowledge translation, thus partnering with key stakeholders throughout the planning, implementation and dissemination stages to ensure topic relevance and impact on future practice and policy. The search and selection strategies drew upon established systematic review methodologies as outlined by the Centre for Reviews and Dissemination and also incorporate guidelines for selection and appraisal of grey literature. Two search phases (a database and a grey literature phase) will identify literature for screening and final selection based on an inclusion/exclusion checklist. Quality appraisal will be performed using the tools produced by the Centre for Evidence Based Management. The narrative synthesis will be informed by Popay et al.’s (2006) framework using identified tools for each of its four elements. The integrated knowledge translation plan will ensure key messages are delivered in an audience-specific manner to optimize their impact on policy and practice change throughout health service, public health, immigration and community sectors.
Accessibility

• Access
  – Physical
    • Increasing access to findings published in Journals, online, open access, systematic reviews
  – Conceptual
    • What does this mean for my practice, location, context, culture
...what do we mean by practice?

Researchers revere theories and concepts, clinicians and decision makers want evidence which is relevant and easy to understand.

Researchers often take years to complete research studies, clinicians and decision makers want answers quickly (Mitton et al., 2007).

Each side speaks its own technical language (Choi et al., 2005).

One solution is to use interventions such as knowledge brokering as a catalyst to facilitate the knowledge transfer process.
Plain Language

A document is in plain language if users can:

• Find what they need
• Understand what they find
• Use what they find to meet their needs
<table>
<thead>
<tr>
<th>IS:</th>
<th>IS NOT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audience-defined</td>
<td>Full of jargon or difficult vocabulary</td>
</tr>
<tr>
<td>Message-driven</td>
<td>Long-winded</td>
</tr>
<tr>
<td>Clear</td>
<td>Convoluted</td>
</tr>
<tr>
<td>Concise</td>
<td>Overly-complex</td>
</tr>
<tr>
<td>Easily understood</td>
<td>Obscure</td>
</tr>
<tr>
<td></td>
<td>Simplistic</td>
</tr>
<tr>
<td></td>
<td>Patronizing</td>
</tr>
</tbody>
</table>
What Makes Up Plain Language?

• Logical organization
• “You” & other pronouns
• The active voice
• Common, everyday words
• Short sentences & paragraphs
• Easy-to-read design features (sub-headings, lists, white space, etc.)
Novice to Expert Funnel

= Layers or levels of information designed to meet needs of all primary & secondary audiences

= headline > summary > full report > data

• Website is the ideal vehicle: next layer of information is just a click away....
• Also works with information kits: brochure, FAQ’s, full report, appendices
What is an audience?

Definition of AUDIENCE

1 : the act or state of hearing

2 a : a formal hearing or interview <an audience with the pope>
   b : an opportunity of being heard <I would succeed if I were once given audience>

3 a : a group of listeners or spectators
   b : a reading, viewing, or listening public

4 : a group of ardent admirers or devotees : FOLLOWING
What is an audience?

<table>
<thead>
<tr>
<th>Particular (real)</th>
<th>characterized by the individuals that make up the audience, they range in size and composition, particular audiences can come together to form a &quot;composite&quot; audience of multiple particular groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>a type of particular audience that is composed of individuals who are face-to-face subjects with a speaker and a speaker’s text or speech</td>
</tr>
<tr>
<td>Mediated</td>
<td>a type of particular audience that is composed of individuals who consume texts in a manner that is different from the time or place in which the speaker presents a text. Audiences who consume texts or speeches through television, radio, and Internet are considered mediated audiences.</td>
</tr>
</tbody>
</table>

http://en.wikipedia.org/wiki/Audience
# What is an audience?

<table>
<thead>
<tr>
<th>Theoretical (imagined)</th>
<th>audiences that are imagined for the purpose of helping the speaker compose, or a critic to understand, a rhetorical text or speech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self as audience (self-deliberation)</td>
<td>deeply considers, questions, and deliberates over the content of the ideas they are conveying,</td>
</tr>
<tr>
<td>Universal audience</td>
<td>universal audience is an imagined audience that serves as an ethical and argumentative test</td>
</tr>
<tr>
<td>Ideal audience</td>
<td>a target audience, a group of individuals that will be addressed, persuaded, or affected by the speech or text</td>
</tr>
<tr>
<td>Implied audience</td>
<td>an imaginary audience determined by an auditor or reader as the text’s constructed audience</td>
</tr>
</tbody>
</table>

Worksheet: Audience(s)

List 5 audiences for the output of your work

1.
2.
3.
4.
5.

Compare your list with your partner – group discussion

• Identify overlaps

• Identify gaps
# Elements of a KT portfolio

<table>
<thead>
<tr>
<th>Type of Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Events</td>
<td>face-to-face activities that provide some level of stakeholder involvement</td>
</tr>
<tr>
<td>Publications</td>
<td>material published on paper or online</td>
</tr>
<tr>
<td>Meta-Tools (overall process)</td>
<td>things or processes used to carry out KT activities</td>
</tr>
<tr>
<td>Sustainability</td>
<td>central point for collecting and distributing information that supports KT activity</td>
</tr>
<tr>
<td>Learning</td>
<td>tacit and explicit learning processes, includes both formal and informal methods</td>
</tr>
</tbody>
</table>
Events

• Advisory board
• Book launch/signing
• Colloquium
• Community meeting
• Consortium
• Conference
• Contest
• Demonstration
• Exhibit
• Festival

• Focus group
• Forum
• Informal event
• Knowledge exchange panel
• Knowledge fair
• Media panel
• Meeting
• Performance
• Professional association
• Other…
Events

• Professional development day
• Retreat
• Roundtable
• Seminar
• Speaker series
• Stand-down
• Strategy session
• Symposium
• Storytelling

• Tours
• Town hall
• Training
• Training literacy
• Workshops
  – Capacity building
  – Community leaders
  – Educators
  – Knowledge transfer
  – Multiple solutions
  – Series

May 1-2, 2014
Publications

- Background papers
- Bibliography
- Boor review
- Brief
- Brochure
- Case study
- Editorial
- Editorial board
- Fact sheet
- Flyer

- Guidelines
- Road map
- Handbook
- Ice breaker
- Information packet
- Interpretative materials
- Manuals
- One-pager
- Policy update
- Presentations
Publications

- Cartooning
- Presentation handout
- Press release
- Public service announcement
- Publishing program
  - Community experiences
  - Fiction
  - Magazine
  - Memoir
  - Op-ed
- Poetry
- Popular press books
- Quizzes
- Research papers
- Resource toolkit
- Synthesis paper
- Systematic review

May 1-2, 2014
Meta-tools

• Generic
  – Academic research papers
  – Environmental scan
  – Journaling
  – KMb handbook
  – Needs assessment studies
  – Synthesis
  – Template

• Exploring
  – Design experiments
  – Experimental projects
  – Incubator
  – Matchmaking
  – Pilots
Meta-tools

• Developing reference materials
  – Acronym list
  – Bibliography
  – Catalogue
  – Glossary
  – Lexicon
  – Thesaurus
  – Value-chain

• Consulting approaches
  – Community
  – Consultations
  – Network
  – Specialized expertise

• Media
  – Documentary
  – DVD
  – Film festival;
  – Graphics
  – Movie
  – Radio program
  – Story pitches
  – Television show
  – Theatre
  – Training video
  – Video series
Sustainability

- Advisory Board
- Champion Network
- Communication forum
- Community map
- Web conference
- Content management system
- Database
- Decision support system

- Directory
- Discussion forum
- Discovery tools
- Distance learning studio
- Expert network
- Gaming
- Global dialogue
- Hot links
- Hyperlinks
- Intranet
Sustainability

- Knowledge networks
- Learning trajectory
- Linking
- Marketing platform
- Portal
- Reading tools
- Server
- Simulations
- User accounts
- Virtual learning commons

- Living repositories
  - Annals
  - Art Gallery
  - Bulletin boards
  - Clearinghouse
  - Compendium
  - Events on-line
  - Exhibits
  - Interactive Q&A
  - Library
  - Publications on-line
  - Preservation systems
Sustainability

• Living repositories
  – Project journal on-line
  – Research inventory
  – Web-page
  – Virtual resource room
  – Web site
  – Wiki

• Media and Web
  – Blog
  – Chat room
  – Commentary
  – Community Bulletins
  – Distribution list

  – E-Mail/E-newsletter
  – Knowledge streaming
  – KT Rounds
  – Newsletter summaries
  – Podcasts
  – Research progress reports
  – Streaming
  – Telecommuting
  – Teleconferencing
  – Video conferencing
  – Web-casting
  – Web magazine
  – Wikipedia
  – You-tube
Learning

- Adult education
- Camp assistant
- Coaching
- Collaborative exploration
- Distance learning
- Interpretative centre
- Job shadowing
- Mentoring
- Professional development
- Student field testing

- Train-the-trainer
- Training partner
- Web courses
- Accredited self-study
- Co-op arrangements
- Certification program
- Curriculum addition
- Graduate program
- Graduate research forum
- Internship
Learning

• Lunch & learn
• Peer review
• Practicum
• Practitioner on campus
• Research mentor
• Residence fellowship
• Art production
• Children and Youth certificate/diploma
• Role playing
• Summer camps
• Summer school

• 3-D virtual reality
• Video series
• Web Quests

And we could add more.
Knowledge brokering links researchers and decision makers, facilitating their interaction so that they are able to better understand each other's goals and professional culture, influence each other's work, forge new partnerships, and use research-based evidence. Brokering is ultimately about supporting evidence-based decision-making in the organization, management, and delivery of health services.

http://www.chsrf.ca/keys/glossary_e.php
What is Knowledge Brokering?

Knowledge brokering is a dynamic activity that is the human force behind knowledge exchange and adoption. It involves bringing people together, helping to build links, identifying gaps and needs, and sharing ideas. It allows information to be used to solve a problem or lead to a better way of doing things. It also includes assisting groups to communicate and understand each others’ abilities and needs, and assists with guiding people to sources of research. This may include summarising and synthesising research and policy into easily understood formats and transforming issues into research questions. Knowledge brokering encourages the use of research in planning and implementation and uses evaluation activities to identify successes or improvements.

Roles of Knowledge Brokers

- **Information Intermediary/Infomediary**
  - Enabling access to information from multiple sources

- **Knowledge intermediary/knowledge translator**
  - Helping people make sense of and apply information

- **Knowledge broker**
  - Improving knowledge use in decision making

- **Innovation broker**
  - Changing contexts to enable innovation
Roles of Knowledge Brokers

The six functions of knowledge brokering

Informing  Linking  Matchmaking  Focused Collaboration  Strategic Collaboration  Building Institutions  Behaviour Change

Informing: disseminating content  Linking: linking expertise to need for a particular issue  Matchmaking: matching expertise to need across different issues or disciplines  Focused collaboration: building collaborative relationships around a particular issue  Strategic collaboration: building longer-term, broader, collaborative relationships  Building institutions: build sustainable, resilient institutions which can respond to multiple issues simultaneously  Behaviour change and social learning by individuals and institutions


Reproduced from Shaxson and Gwyn (2010)
Core skills of a knowledge broker

The role of the broker depends on the organization, but there is a basic skill set:

• bring people together and facilitate their interaction;

• find research-based and other evidence to shape decisions;

• assess evidence, interpret it, and adapt it to circumstances;

• a knowledge of marketing, communication and the industry/sector they work in; and

• identify emerging management and policy issues which research could help to resolve.

http://www.chsrf.ca/migrated/pdf/Theory_and_Practice_e.pdf
Core skills of a knowledge broker

Personal Attributes

Knowledge Brokers should be inquisitive, enthusiastic, flexible, inspirational, imaginative, highly credible and keenly interested in learning. They should be skilled analysts, able to see the 'big picture' and be able to readily identify links between ideas and pieces of information.

Evidence Gathering Skills

Knowledge Brokers should be aware of the best sources of synthesized evidence and original studies within their content area and have focused expertise in searching these sources for research evidence. They should also be skilled in searching for less formal contextual evidence such as policy documents and evaluation reports. The ability to evaluate the effectiveness of knowledge brokering activities is also a necessary skill for an effective Knowledge Broker.

Core skills of a knowledge broker

Critical Appraisal Skills

Knowledge Brokers should be adept at appraising evidence to evaluate its quality, importance, and applicability to a particular context. In addition to traditional critical appraisal skills, they should have knowledge of the sector, the broader industry environment, its key players and controversies - and use this to gauge the applicability and adaptability of new evidence to user contexts.

Core skills of a knowledge broker

Communication Skills

Knowledge Brokers should have strong oral and written communication skills and use a variety of methods targeted to the needs of the diverse stakeholders (e.g., researchers, practitioners, policy-makers, managers, and customers/clients/consumers/citizens). They should use active listening skills to gain insight into the interests, issues and innovations of their network members.

Core skills of a knowledge broker

Mediation Skills

To function as effective relationship builders, Knowledge Brokers should be skilled mediators. They assemble teams and foster collaboration amongst individuals and groups who would not normally work together. They reconcile misunderstandings, facilitate the identification of shared goals, and negotiate mutually beneficial roles for all group members.

Tasks of a Knowledge Broker

The tasks of a broker include:

• bringing people together to exchange information and work together;
• helping groups communicate and understand each other’s needs and abilities;
• pushing for the use of research in planning and delivering services;
• monitoring and evaluating practices, to identify successes or needed changes;
• transforming management issues into research questions;
• synthesizing and summarizing research and decision-maker priorities; and
• ‘navigating’ or guiding through sources of research.

http://www.chsrf.ca/migrated/pdf/Theory_and_Practice_e.pdf
What are people doing?

Go to Handout #2

– Read Story 1:
  – Dr. Vicky Ward: The case of the accidental knowledge broker

– Questions and Discussion
  • What does Vicky mean when she says “it’s a complex process?
  • What is an expert?
  • What are real-world settings?
What are people doing?

Go to Handout #2

– Read Story 2:

– Dr. Alex Bielak: From Science to Science Communication to Knowledge Brokering

– Questions and Discussion
  • Do you think knowledge brokers have a clear career pathway?
  • Why do you think networks are important?
  • How is knowledge brokering different than communications?
What are people doing?

Go to Handout #2

– Read Story 3:

– Dr. Melanie Barwick: Tinker, Tailor, Soldier, Spy: Building the Science, Practice, and Profession of Knowledge Translation

– Questions and Discussion
  • Why is training not a one-off endeavour?
  • Why does knowledge brokering draw from many disciplines?
  • Why is change difficult?
National Collaborating Centres

• Established in 2005 through funding from PHAC

• Six National Collaborating Centres (NCCs) located throughout the country

• Goal: to strengthen and renew the public health system in Canada.

• Improve public health programs and policies more effective by:
  – increasing awareness of new and existing knowledge,
  – identifying and helping address public health priorities,
  – collaborating with established public health networks, and
  – identifying gaps in knowledge and relevant applied research
National Collaborating Centres

• Online Learning Modules
  – Introduction to Evidence-Informed Decision Making
  – Critical Appraisal of Intervention Studies
United States

- **Agency for Healthcare Research and Quality (AHRQ)** aims to promote evidence-based practice in everyday care through establishment of the Evidence-based Practice Center (EPC) Program.

- **Centers for Disease Control** – Public Health Matters Blog started in 2008 as a knowledge exchange tool cultivated by scientists and subject matter experts who work with critical infectious diseases.

- **Substance Abuse and Mental Health Services Administration** – National Registry of Evidence-based Programs and Practices - searchable online registry of more than 220 interventions supporting mental health promotion and substance abuse prevention.
United Kingdom

- **University of Oxford** – Centre for Evidence-based Medicine aims to develop, teach and promote evidence-based health care and support physicians and health care professionals maintain the highest standards of medicine.

- **Cochrane Collaboration** - International not-for-profit network of more than 28,000 dedicated people from over 100 countries.

- **Cochrane Reviews**: systematic reviews of primary research in human health care and health policy - internationally recognized as the highest standard in evidence-based healthcare.
Australia

• **Australian Department of Health Services – Indigenous Training and Recruitment Initiatives (INTRAIN)** scholarships offered to Victorian Indigenous people to assist them to complete degrees and diplomas in the health and community sector.

• **Health and Wellbeing Guidelines**
What is a Community of Practice?

• Communities of Practice are groups of people who share a concern or passion for something they do and learn how to do it better as they interact regularly. (E. Wenger)

• They help groups tap into the collective intelligence of other groups and individuals to help improve practice.
PHAC opportunities: communities of practice
PHAC opportunities:
communities of practice
Success Story:
Collaborative Forums for Problem Solving

http://youtu.be/YgGAJeXbIFM
Implementing a Community of Practice

**Stages of Development**

- **Potential**
  - People face similar situations without the benefit of a shared practice
  - Finding each other, discovering commonalities

- **Coalescing**
  - Members come together and recognize their potential
  - Exploring connectedness, defining joint enterprise, negotiating community

- **Active**
  - Members engage in developing a practice
  - Engaging in joint activities, creating artifacts, adapting to changing circumstances, renewing interest, commitment, and relationships

- **Dispersed**
  - Members no longer engage very intensely, but the community is still alive as a force and a center of knowledge
  - Staying in touch, communicating, holding reunions, calling for advice

- **Memorable**
  - The community is no longer central, but people still remember it as a significant part of their identities
  - Telling stories, preserving artifacts, collecting memorabilia

**Typical Activities**

- Coalescing: Exploring connectedness, defining joint enterprise, negotiating community
- Active: Engaging in joint activities, creating artifacts, adapting to changing circumstances, renewing interest, commitment, and relationships
- Dispersed: Staying in touch, communicating, holding reunions, calling for advice
- Memorable: Telling stories, preserving artifacts, collecting memorabilia
10 things to avoid

• Not having a proper facilitator
• Relying too much on technology as a basis for exchange (technology is an enabler)
• Not using enough technology (the point is using it too much and not using it at all are both mistakes)
• Insufficient engagement and follow-up around CoP meetings
• Insufficient time and poor time management

• Not having a shared purpose
• Not having flexible communication strategies
• Not having the proper marketing in place to increase levels of participation
• Not having a proper value statement so leaders can see the value-added of CoPs
• Unsustainable/un-scalable goals
MAPLE LEAF FOODS
What: ready-to-eat meat products (*Listeria monocytogenes*)
Where: Maple Leaf Foods, Bartor Road Plant – Weston, ON
When: between July and September 2008
Who: Ontario, British Columbia, Alberta, Saskatchewan, Quebec, New Brunswick, Manitoba (N=57; 22 deaths)
Brief:
- Early July National Microbiology Lab (NML) received 2 Listeria specimens from Ontario, 2 additional cases reported within same Long Term Care facility in Toronto
- Toronto Public Health (TPH) investigates the LTC facility
- Increased cases detected via the provincial surveillance system by late July
- TPH confirms Maple Leaf Foods deli meats used at the LTC facility tested positive for *Listeria monocytogenes*
- CFIA launches investigation at Maple Leaf Foods Barter Road Plant
- Early August DNA fingerprint matches cases from several provinces (first indication of a potential national outbreak)
- Possible links between cases in other institutions within Ontario emerge
- CFIA confirms source as Sure Slico products from Maple Leaf Bartor Road Plant
- Health Hazard Alert issued to public immediately followed by 2 recalls of Maple Leaf Brand products
- Maple Leaf suspends all production at Bartor Road plant
- It was determined that the slicing machines most likely were the source of food contamination
- Mid-September plant re-opens
- Independent Investigative Review (Weatherill Report) submitted to the government making 57 recommendations

**Strength:** Maple Leaf Foods went public and accepted full responsibility for the outbreak, suspended production at the plant and voluntarily recalled numerous products

**Gaps/Recommendations:**
- Lack of senior management focus on food safety both in private and public sectors
- State of readiness
- National Communications with the public
- Lack of urgency at the outset of outbreak
- 57 recommendations provided to government via Weatherill Report—many of which have been actioned (numerous policy implications)
  - PHAC’s Foodborne Illness Outbreak Response Protocol
  - Weight of Evidence Guidance Document (used by HC, CFIA, PHAC)
  - Communication — consumer food safety education and information [www.foodsafety.gc.ca](http://www.foodsafety.gc.ca)

**Key References:**
5. Health Canada Lessons Learned from Listeriosis (attached in email since link no longer available)
8. [http://www.bcfpa.net/Attachments/Presentations/Listeriosis%20in%20Canada%20(J%20Farber)%2015%20June%202010.pdf](http://www.bcfpa.net/Attachments/Presentations/Listeriosis%20in%20Canada%20(J%20Farber)%2015%20June%202010.pdf)
**XL FOODS**

**What:** largest recall of beef and beef products in Canadian history (E. coli O157:H7)

**Where:** XL Foods Inc.’s plant at Brooks, Alberta

**When:** between September and October 2012

**Who:** Canadian, US and International markets (N=18 ill)

**Brief:**

- Early September, CFIA inspectors received confirmation of the presence of E. coli O157:H7 in raw beef trimmings tested at the Ginger Beef Choice Ltd.
- Plant in Calgary, a secondary beef processor
- Quickly traced the raw product back to XL Foods Inc.’s Brooks plant
- Triggered a CFIA investigation to determine whether same batch was on the market
- Same day CFIA was notified by counterparts within the USDA FSIS that they found E. coli O157:H7 in trimmings exported by XL Foods Inc. to the US
- A public recall was not issued at this time since the contaminated batch tested by FSIS had not been distributed in the Canadian marketplace and because no beef from either of the two tested batches was on Canadian store shelves
- CFIA began to look into the possible source of the contamination
- Ended up resulting in increased number of processing dates associated with contaminated beef resulting in alerts issued
- Approximately 4,000 tonnes of beef and beef products recalled from Canadian, US and other international markets (min 12,000 head of cattle), approximately 1,800 products removed from markets in Canada and US
- Resulted in 18 sick consumers
- Several expansions of a voluntary recall by XL Foods Inc., supported by CFIA
- Independent Review of XL Foods Inc. Beef Recall 2012 released May 2013 with 30 recommendations; highlighting areas that were not improved based on lessons learned from Maple Leaf event

**Strength:** Beef recall was triggered well in advance of human cases being reported, which is believed to have resulted in less cases; had the recall been launched only after illnesses were reported and contaminated products still in retail distribution, more consumers would have purchased and consumed product, resulting in more illnesses.

**Gaps/Recommendations:**

- To strengthen prevention strategies and regulatory oversight
- To strengthen surveillance and trend analysis
- To strengthen incident management and recall response
- To strengthen communication with the public and stakeholders about providing food safety messages

**Re-occurring Issues from the Listeriosis outbreak seen again in XL Outbreak**

- Food Safety Practices at Plant – lack of trend analysis
- Communication – significant improvement across gov’t depts. this time. Gaps still exist: who is lead agency, approval process for rapid communications, public confused by numerous Health Hazard Alerts and recalls
- CFIA inspectors undertrained

**Key References:**

Difference of complicated and complex

**Complicated:**

[Diagram of a complex airplane with its internal components exposed]

**Complex:**

[Photo of a large airplane at an airport with a crowd of people watching]
Complexity of Health: Population Health Promotion Model

- Intricate and multi-level systems
- Influenced by many interconnected factors/conditions
- Requires multiple types of action strategies
- Few easy solutions

Hamilton & Bhatti, 1996.
Obesity System Map: Interplay of Factors
Nature of Public Health Interventions: Implications for Evidence

• Complex, multi-faceted programs that cannot be randomized.
• Natural, community environments and complex set of factors that cannot be controlled.
• Time lag to see final outcomes, intermediate indicators of change not easily captured with standard tools/measures.
• Role of context in interpreting and using evidence / knowledge, importance of assessing applicability & transferability
Emerging area: participatory public health

- Public health 2.0
- Active rather than passive
- Patient self-management - iPatient
- Examples
  - Superbetter
  - UP by Jawbone
  - Livestrong
  - Wii Fit
Emerging area: data mashing and geo-location

• **Geolocation** is the identification of the real-world geographic location of an object, such as a radar, mobile phone or an Internet-connected computer terminal. Geolocation may refer to the practice of assessing the location, or to the actual assessed location.

• Examples:
  • Disaster planning and relief efforts
  • Health policy 2.0 – MHCC Child and Youth Mental Health Policy wiki
A deeper understanding of your knowledge environment(s)

**knowledge environments:**

social practices, technological and physical arrangements intended to facilitate collaborative knowledge building, decision making, inference or discovery

http://en.wikipedia.org/wiki/Knowledge_environment
Visualizing your knowledge environment(s)

http://www.aiim.org/what-is-information-management
Visualizing your knowledge environment(s)

Exercise: Visualizing your knowledge environment(s)

• Individually
  – List 10 elements in your personal knowledge environment

• Pick a partner
  – Compare your list with your partner

• Come back as a group
  – Compare lists
    • Identify overlaps
    • Identify gaps
Worksheet: Visualizing your knowledge environment(s)

List 10 elements in your personal knowledge environment

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Compare your list with your partner – group discussion

• Identify overlaps

• Identify gaps
The hidden influence of social networks

How social networks affect health behaviors

http://www.youtube.com/watch?v=TIFz-XUBjqo
Network Images: Collaboration of Physicists

http://www-personal.umich.edu/~mejn/networks/collab.gif
Network Images: Characters from Les Misérables

http://www-personal.umich.edu/~mejn/networks/lesmis.gif
Examples of Networks

- Existing professional organizations
- Issue advisory committees
- Steering committees
- Working groups
- Communities of Practice
- Quality councils
- Collaborative

- “Soft” or informal networks
- Geographically-defined communities
- Business sectors
- Potential investors
- Advocacy groups
- E-communities (chat rooms, listservs, etc..)
Resources

6. Institute for Work and Health - http://www.iwh.on.ca/

11. Others suggested?
Knowledge Transfer and Exchange Community of Practice

Ontario wide:
http://www.ktecop.ca/

Ottawa:
http://www.knowledgemobilization.net/archives/629
Contact information

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