



National Collaborating Centre
for Methods and Tools

Centre de collaboration nationale
des méthodes et outils

Health
Evidence™

Building Capacity to Support Evidence-Informed Public Health:

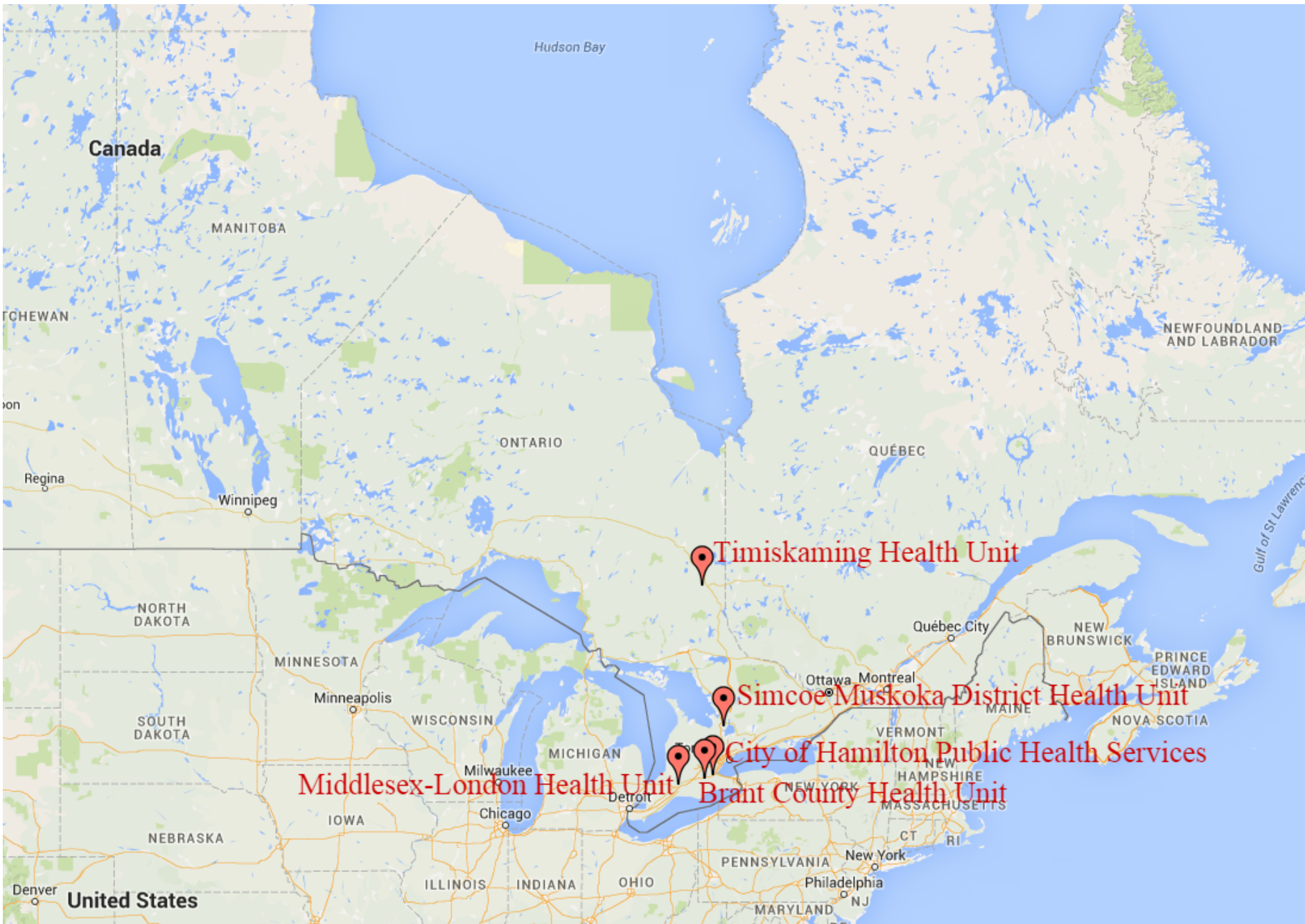
A KNOWLEDGE BROKER MENTORING PROGRAM

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McMaster University

3rd Fuse International Conference on Knowledge
Exchange in Public Health,
Newcastle, UK, April 2016

Conflict of Interest Disclosure

- There are no conflicts of interest



Canada

MANITOBA

ONTARIO

QUÉBEC

NEWFOUNDLAND AND LABRADOR

Regina

Winnipeg

NORTH DAKOTA

MINNESOTA

Minneapolis

SOUTH DAKOTA

WISCONSIN

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NEW HAMPSHIRE

MASSACHUSETTS

Québec City

NEW BRUNSWICK

PRINCE EDWARD ISLAND

NOVA SCOTIA

Ottawa

Montreal

Timiskaming Health Unit

Simcoe Muskoka District Health Unit

City of Hamilton Public Health Services

Brant County Health Unit

Middlesex-London Health Unit

United States

Denver

Objectives

1. Assess and assist health departments in developing organizational capacity for evidence-informed decision making (EIDM)
2. Build individual capacity of selected staff to function as ‘internal’ knowledge brokers in EIDM practice

Activities

Organizational context
development phase

Individual capacity
development phase

	2014			2015												2016			
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
2.5 hr organizational needs assessment	█	█	█																
Selection of KB candidates			█																
In-person training				█					█							█			
Webinars (monthly)				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Email & phone support (bi-weekly)					█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

Assessing Organizational Needs



Is research working for you?

A self-assessment tool and discussion guide for health services management and policy organizations

- Senior management
 - Reviewed tool individually
 - 2.5 hr team focus group
- Consensus on future directions

PART ONE: ACQUIRE

1.1 ARE WE ABLE TO ACQUIRE RESEARCH?

RATING

1 = Strongly disagree 2 = Disagree 3 = Neither agree nor disagree

- We have **skilled staff** for research.
- Our staff has **enough time** for research.
- Our staff has the **incentive** to do research (it is used in our decision-making).
- Our staff has the **resources** to do research.
- We have **arrangements with external experts** who search for research, monitor research, or do research for us.

PART TWO: ASSESS

2.1 CAN WE TELL IF THE RESEARCH IS VALID AND OF HIGH QUALITY?

RATING

1 = Strongly disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Strongly agree

- Staff in our organization has **critical appraisal skills and tools** for evaluating the **quality** of methodology used in research. 1
- Staff in our organization has the **critical appraisal skills** to evaluate the **reliability** of specific research by identifying related evidence and comparing methods and results. 1
- Our organization has **arrangements with external experts** who use **critical appraisal skills and tools** to assess methodology and evidence reliability, and to compare methods and results. 1

PART THREE: ADAPT

3.1 CAN WE SUMMARIZE RESULTS IN A USER-FRIENDLY WAY?

RATING

1 = Strongly disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Strongly agree

- Our organization has enough skilled staff with **communication skills** to present research results in accessible language. 1 2 3 4 5

PART FOUR: APPLY

4.1 DO WE LEAD BY EXAMPLE AND SHOW HOW WE VALUE RESEARCH USE?

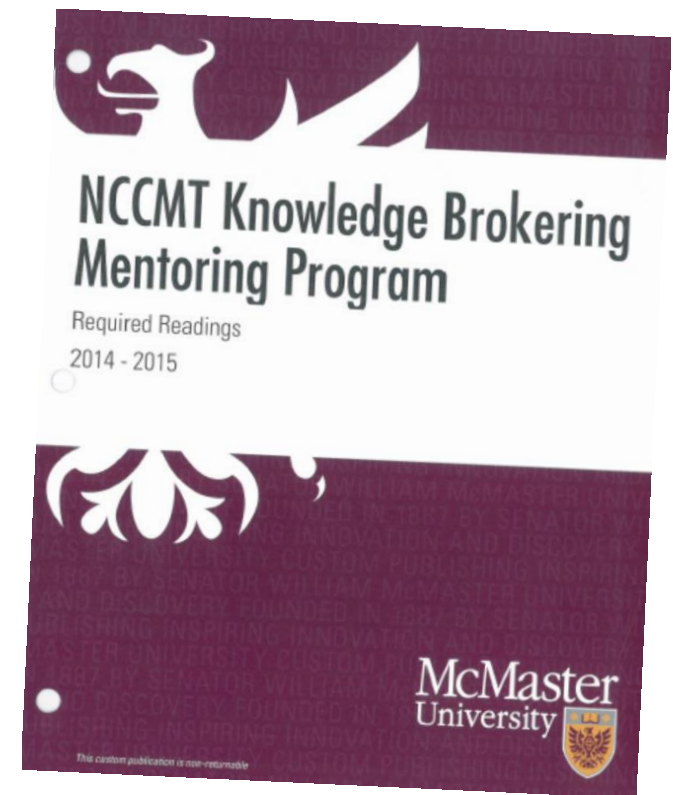
RATING

1 = Strongly disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Strongly agree

- Using **research is a priority** in our organization. 1 2 3 4 5
- Our organization has committed **resources** to ensure **research is accessed, adapted, and applied** in making decisions. 1 2 3 4 5
- Our organization ensures **staff is involved in discussions on how research evidence** relates to our main goals. 1 2 3 4 5

In-person Training

- 10 training days
 - Jan 26-30, 2015 (5 days)
 - Jun 16-18, 2015 (3 days)
 - Jan 19-20, 2016 (2 days)
- Course readings
- Individual & group critical appraisal practice



Monthly Webinars

AMSTAR

1. Was an 'a priori' design provided?
2. Was there duplicate study selection and data extraction?
3. Was a comprehensive literature search performed?
4. Was the status of publication (i.e. grey literature) used as an inclusion criterion?
5. Was a list of studies (included and excluded) provided?
6. Were the characteristics of the included studies provided?

Knowledge Broker Mentoring Program Monthly Webinar (Mar 25)

KB Mentoring Program

10 views

Health Evidence

Share your thoughts

EPHPP Quality Assessment Tool
Selection Bias

A) **SELECTION BIAS**

(01) Are the individuals selected to participate in the study likely to be representative of the target population?

- 1 Very likely
- 2 Somewhat likely
- 3 Not likely
- 4 Can't tell

(02) What percentage of selected individuals agreed to participate?

- 1 100% agreement
- 2 80-79% agreement
- 3 less than 80% agreement
- 4 Not applicable
- 5 Can't tell

RATE THIS SECTION			
See dictionary	STRONG	MODERATE	WEAK
	1	2	3

Knowledge Broker Mentoring Program Monthly Webinar (Apr 30)

KB Mentoring Program

Uploaded on May 8, 2015

Welcome to the Knowledge Broker Mentoring Program's April 2015 Webinar.

ALL COMMENTS (0)

Health Evidence

Share your thoughts

File Sharing via Google Drive

The screenshot displays the Google Drive interface. At the top, the Google logo is on the left, followed by a search bar labeled 'Search Drive'. On the right, there are user avatars for '+Heather' and a grid icon. Below the search bar, the 'Drive' logo is on the left, and the current path 'My Drive > KB Mentoring Program' is shown. A row of user avatars (K, U, U, U, J) and a share icon is visible. A tooltip 'Share "KB Mentoring Program"' is shown above the share icon. The main content area is a table of files:

Name ↑	Owner	Last modified	File size
Brant County	KB Mentoring	Apr 23, 2015 KB Mentoring	—
Hamilton	KB Mentoring	Apr 23, 2015 KB Mentoring	—
Middlesex-London	KB Mentoring	Apr 23, 2015 KB Mentoring	—
Simcoe Muskoka	KB Mentoring	Apr 23, 2015 KB Mentoring	—
Timiskaming	KB Mentoring	Apr 23, 2015 KB Mentoring	—
Webinar Slides	KB Mentoring	May 4, 2015 KB Mentoring	—
KBMentoringCurriculum_ProjectDetails_02Oct2014.pdf	me	Apr 23, 2015 me	299 KB
Monthly Webinar Links	KB Mentoring	May 8, 2015 KB Mentoring	—

On the left sidebar, there is a 'NEW' button and a list of folders: 'My Drive', 'KB Mentoring Program', 'Shared with me', 'Google Photos', 'Recent', 'Starred', and 'Trash'. At the bottom left, it shows '12 MB used (0%)'. On the right sidebar, the 'KB Mentoring Program' folder is selected, showing 'Details' and 'Activity' tabs. The 'Activity' tab is active, showing a list of recent actions:

- EARLIER THIS MONTH
- KB Mentoring** edited an item
May 8
 Monthly Webinar Links
- KB Mentoring** uploaded 2 items
May 8
 - KB Mentoring Program - Feb...
 - KB Mentoring Program - Mar...
- KB Mentoring** shared 9 items
May 4
 - KB Mentoring Program - Apr...
 - KBMentoringCurriculum_Pro...
 - Timiskaming

Blogging About the Experience

<http://www.thueidm.blogspot.ca/>



The image is a screenshot of a web browser displaying a blog post. The browser's address bar shows the URL 'www.thueidm.blogspot.ca'. Below the address bar, there are navigation elements like 'New Tab', 'BOOKMARKS', and search options. The main content area features a large, light-colored header with the title 'THU: Using Evidence'. Below the header is a paragraph of text. To the right of the main text is a sidebar with the heading 'About this blog' and a list of staff members. At the bottom of the main text area, there is a video player showing a woman speaking, with the title 'NCCMT Profiles - Starting ...'.

www.thueidm.blogspot.ca

New Tab BOOKMARKS

Q G+ 0 More Next Blog»

THU: Using Evidence

Documenting THU's work in becoming effective at accessing and understanding and using research evidence. Because so much is already known, because we all want to be as effective as we can, because our work matters.

Thursday, February 25, 2016

Story from the Field: Even Peel had to start somewhere.

Sharing a video produced by NCCMT about Peel Public Health's journey in becoming the EIDM powerhouse we know it to be today. Think we'll have a video like this about Temiskaming some day?

About this blog

THU is part of a 16-month project to get better at using evidence in decision-making.

5 staff are being mentored: building specific skills and practising ways to support our colleagues and our organization in using evidence. We are working with the National Collaborating Centre for Methods and Tools housed at McMaster University.

We are:

- Shari Brown**, Public Health Nurse
- Erin Cowan**, Research & Policy Analyst
- Caroline McBride**, Registered Dietitian
- Shauna McGill**, Research & Policy Analyst
- Amanda Mongeon**, Program Evaluator

NCCMT Profiles - Starting ...



Change: EIDM Knowledge & Skills

- 10 skills assessment Qs (pre/post)
 - Difference in mean scores between pre/post (Mann-Whitney rank test)
 - % correct pre/post, stratified by Q (Chi-square test)

Results

- Overall, statistically significant improvement in knowledge pre-post
 - Pre-test score mean \pm SD = 60.7 \pm 17.5
 - Post-test score mean \pm SD = 77.6 \pm 9.7
 - Mean difference=16.9 P <0.001
- Specifically, statistically significant improvements observed in:
 - Factors to consider when applying results of studies
 - Interpreting quantitative findings from single studies and meta-analyses

Limitations

- Small sample (30 participants; 27 completed pre-test; 25 completed post-test)
- Single group pre-post
- Significant variation in knowledge among participants at baseline
- Ceiling effect (some participants had very high knowledge at baseline, resulting in no difference at post-test)

Conclusions

- Knowledge brokering is a promising strategy for developing knowledge and capacity among public health professionals
- Expansion of program across Canada!
- Dissemination of program findings via publication(s) and conferences



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for Methods and Tools

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Health EvidenceTM
Helping public **health** use best **evidence** in practice

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The Centre for Translational
Research in Public Health

Comparing knowledge exchange across 5 Centres of Excellence in Public Health

*Peter van der Graaf (Fuse); Oliver Francis (CEDAR);
Elizabeth Doe (DECIPHer); Eimear Barrett (Northern
Ireland); Graeme Docherty (UKCTAS)*

**Third Fuse International Conference on Knowledge
Exchange in Public Health, 27-28 April 2016**



Content


- Why knowledge exchange?
- Public Health Research Centres of Excellence (PHR CoE)
- Developing a model for comparing practices
- Five case studies
- Similarities and differences
- Lessons and recommendations





Why knowledge exchange?

Difficulties in mobilising PH research evidence:

- Policy makers cannot access (and understand) academic publications
 - Mismatch between academic timescales and policy processes
 - Different types of evidence are valued
-  Need for more structural meeting places



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The Centre of Excellence for
Public Health
Northern Ireland

CIPHer

Development and Evaluation of Complex
Interventions for Public Health Improvement
A UKCRC Public Health Research Centre of Excellence

CEDAR

Centre for Diet and Activity Research
A UKCRC Public Health Research Centre of Excellence



UKCTAS

UK Centre for Tobacco & Alcohol Studies

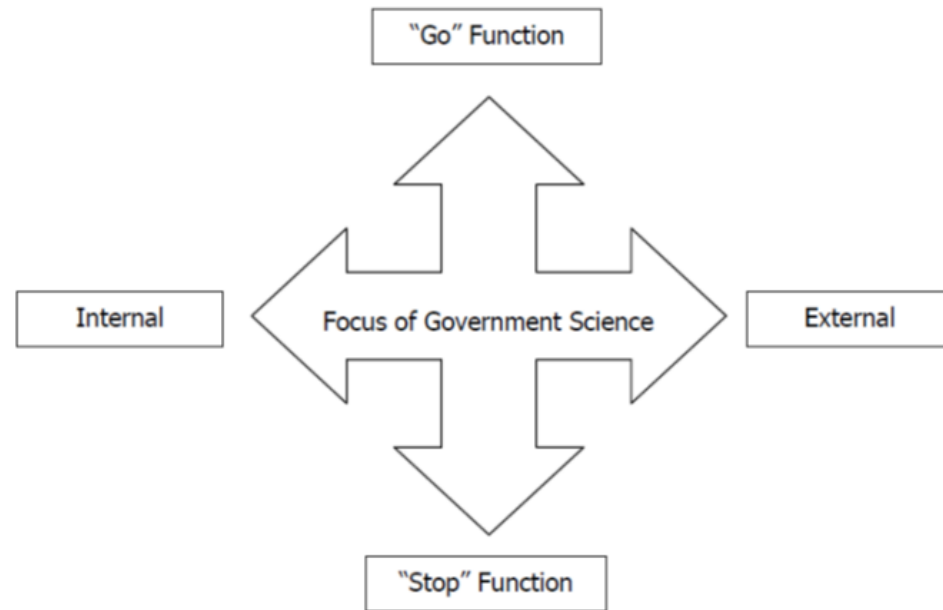
- 2008: five UKCRC Public Health Research Centres of Excellence (PHR CoE) funded
- Aims: build local and national research capacity in public health and engage with policy and practice across UK to increase flow of evidence
- Each CoE has developed their own model for knowledge exchange
- Informal sharing of approaches across centres but no detailed comparisons to date

Model: interfaces between policy and academia

Different manifestations depending on:

- **Focus** (internal or external)
- **Purpose** (Stop or Go function)
- **Type** of activity (range for low to high engagement)

Figure 3: A Basic Classification Scheme for Scientific Activities in Government



Saner, 2007; Ward et al., 2012



5 case studies

- **CEDAR:** knowledge exchange in active travel research
- **DECIPHer:** Public Health Improvement Research Network (PHIRN) in Wales
- **CoENI:** formally partnering government with academia
- **Fuse:** responsive research and evaluation service (AskFuse)
- **UKCTAS:** Building on collaborative relationships with policy partners and charitable bodies



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Case study 1: RDGs @

DECIpHer

Development and Evaluation of Complex
Interventions for Public Health Improvement
A UKCRC Public Health Research Centre of Excellence

- Research ideas are developed into funded projects through Research Development Groups
- Since 2006, PHIRN has developed 119 RDGs and 71 successfully funded grant proposals, bringing in more than £30M in research grants
- Temporarily projects become embedded in wider structures (e.g. Welsh Network of Healthy Schools Schemes)



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Case study 2: KESS @

The Centre of Excellence for
Public Health
Northern Ireland



- RDGs are time and resource intensive: not for everyone
- Present at local breakfast meetings for politicians
- Knowledge Exchange Seminar Series (KESS) in partnership with Northern Ireland Assembly
- Academics prepare policy briefing in advance (skill development and dissemination)

Comparing case studies on three dimensions

Case study	Function (Go – Stop)	Focus (Internal – External)	Type/ Scale (Low – High)
CEDAR	Go (developing new research)	Internal (academic staff); External (national policy makers)	Range of interdependent activities (info management, linkage, capacity development)
DECIPHer	Go (developing new research)	Internalising external audiences (national policy makers)	Early linkage and capacity development to build strategic partnerships for focused engagement (RDGs)
CoENI	Go (developing new research)	Internal (academic staff); External (national policy makers)	Focused engagement (RDGs) and wider linkage that supports capacity building
Fuse	Go (developing new research)	External (local policy makers and practitioners)	Range of activities, either separate or organic development (info management, linkage, capacity development and decision and implementation support)
UKCTAS	Stop (controlling pollution problem)	External (national policy makers)	Range of organic developed activities (info management, linkage, capacity development and decision and implementation support)



Discussion

- Common approaches but different structures and processes for *linking KE activities*
- **Fluidity** of focus: KE activities move purposefully between internal and external audiences to link them
- **Temporality** of function: time limited structures for bringing academics and policy makers together (RDGs)
- **Range of types**: Intensity versus inclusivity? Develop additional mechanisms for wider inclusion (KESS)
- **Structural** KE approach versus **organic** progression



Conclusions

- Different KE practices in response local needs and existing structures -> no silver bullet
- Importance of linking range of activities that engage at different levels and points in decision making
- Building on each activity (structural and organic) to develop a structural approach to KE



KE similar to complex interventions?

Common elements:

- Interventions with several interacting components
- Difficulty of standardising design and delivery
- Sensitivity to features of local context
- Length and complexity of causal chains linking intervention with outcome

(MRC Guidance - Developing and evaluating complex interventions)





Recommendations

- Develop and integrate communications and knowledge exchange strategies at each PHR CoE
- Keep long term focus for developing structural approaches to KE: be flexible and enable iterations
- Build KE capacity within researchers not just KE professionals at all stages of career pathways
- Systematically monitor and evaluate impact of KE activities with a range of methodologies and tools



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**THANK YOU
FOR
YOUR
ATTENTION!
ANY QUESTIONS?**



References

Saner, M. (2007) A Map of the Interface Between Science & Policy), Staff Papers, Council of Canadian Academies.

Ward, V. Smith, S., House, A., Hamer (2012) Exploring knowledge exchange: A useful framework for practice and policy, *Social Science & Medicine*, 74(3): 297-304.

MRC (2008) Developing and evaluating complex interventions: new guidance.

An aerial photograph of a stone wall in a green field. The wall is made of large, rectangular stones and runs diagonally across the frame. The field is lush green with some brown patches. In the background, there are rolling hills and a cloudy sky. The text is overlaid on the center of the image.

**Evaluation of the Impact
of an organizational strategy
for evidence-informed decision making**

Megan Ward

F.U.S.E.

Newcastle Upon Tyne

April 28, 2016

Is Research Working for You?

2008	2010	2013
X Access	Library	2 FT librarians
X Critical appraisal	38 Critical appraisal training	107 Critical appraisal training
X Time	8 Rapid reviews	37 Rapid reviews
		X Frontline needs

Research grants

2010	16
2011	14
2012	13
2013	11
2014	4
2015	10

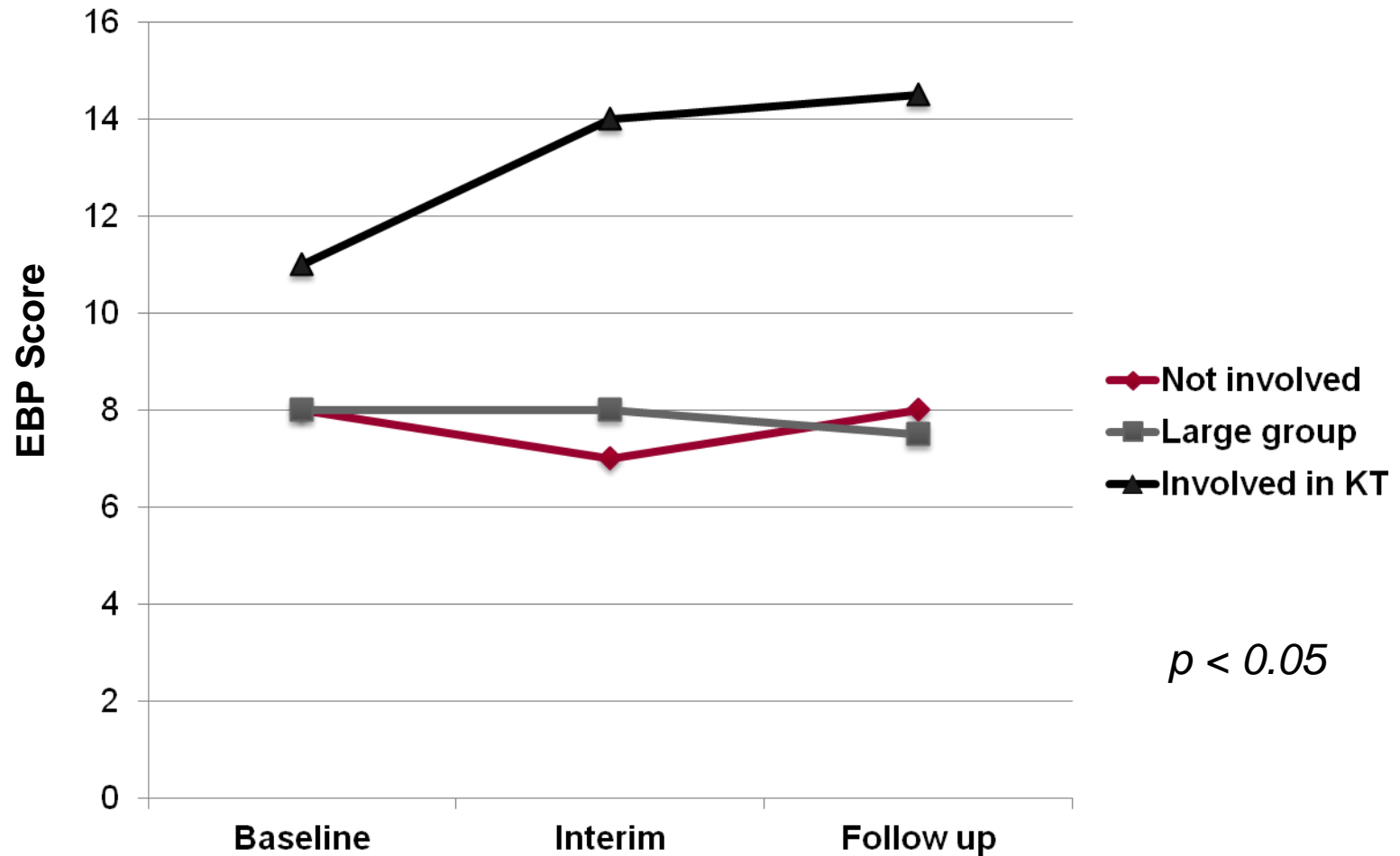
Research and Knowledge Translation Projects 2013

Title	Funding Body (Program)	Partner	Peel Contacts
Approaches to Accountability: Implications of Goals, Governance, Services, and Sub-sectors	CIHR (PHSI)	University of Toronto	Dr. David Mowat
Evidence-Informed Practice Change - Increasing Breastfeeding Exclusivity in Hospital	CFHI (EXTRA)	Trillium Health Partners	Debbie Chang and Cheryl Morin
Background and Consequences of Work Engagement and Burnout Among Canadian Dietitians	CIHR (K to A)	University of Toronto	Sandra Fitzpatrick
The Renewing Public Health Systems (RePHS)	CIHR (K to A)	Government of British Columbia, Public Health Ontario	Gayle Bursey, Maria Morais
Healthy Canada by Design	CPAC (CLASP)	HSFC, UPHN, CIP	Dr. David Mowat
Syndromic Surveillance Evaluation Study - Algorithms and Response Protocols for Public Health Surveillance	CIHR	Public Health Ontario and Alberta Health Services	Dr. David Mowat, Monali Varia, Maureen Horn
Knowledge Exchange Mechanisms for Health Status, Surveillance and Research Data	CFHI (EXTRA)		Julie Stratton, Monali Varia
Evidence-Informed Policy Development - A Process for a Diverse Population	CFHI (EXTRA)		Dr. Eileen, de Villa, Gayle Bursey
A Framework for Public Health Emergency Preparedness: Setting Research Priorities	CIHR	Public Health Ontario	Dr. Eileen de Villa
Building Capacity to Use Data and Evidence through In-service Education	PHAC	Montréalégie Region (Quebec), University of Waterloo, Public Health Ontario and Durham Region	Dr. David Mowat, Julie Stratton, Bev Bryant
Supporting Diabetes Population Health Risk Tools in Practice: Partnerships to Guide Adaption, Implementation and Evaluation	CIHR	University of Toronto, Simcoe Muskoka District Health Unit, Manitoba Health, and Sandy Bay First Nations Community	Dr. David Mowat

Partnerships for Health System Improvement

- The grant asked: *What is the impact of a tailored KT strategy on Knowledge, capacity and behaviour for EIDM?*
- *What contextual factors facilitate and/or impeded impact?*

EIDM Behaviour



Case Study

- 2008-2010

- Clear vision and strong leadership
- Workforce and skills development
- Library services
- Financial investments
- Acquisition and development of technological resources
- Knowledge management strategy
- Effective communication
- Receptive organizational culture
- Focus on change management

- Peirson L, Ciliska D, Dobbins M, Mowat, D. *Building capacity for evidence informed decision making in public health: a case study of organizational change*. BMC Public Health, 2012, 12:137

Case study of organizational Change

● 2013

- Strategy had focused on supporting high quality rapid reviews
- Most investments directed to critical mass of 100 staff
- Skills and confidence increasing
- More work needed to developed skills in particular areas
- Need to build capacity and rigor in other domains of decision making
- Reduce competing demands on managers
- Mentor managers to independently lead reviews and change
- Share common findings across divisions

Smoking in the Movies



Hey Parents,
We Trust you To
do The right Thing.

At least
185,000
kids today in
Ontario will
start smoking
because they
saw smoking
in movies.

Movies influence kids.
Make them smoke-free.

SmokeFreeMovies.ca

HEALTH UNIT
LOGO

Source: Ontario Tobacco Research Unit



Hey Parents,
You've got our
backs, right?

In the past 10 years,
85% of movies with
smoking were rated for
kids and teens.

Movies influence kids.
Make them smoke-free.

SmokeFreeMovies.ca

HEALTH UNIT
LOGO

Source: Ontario Tobacco Research Unit

2015 Rapid Reviews

- [Effective Use of Pit and Fissure Sealants to Prevent Pit and Fissure Caries on the Permanent Posterior Teeth of Children and Youth](#)
- [Effective Interventions to Reduce Alcohol-related Harm in Licensed Establishments: A Rapid Review of the Literature](#)
- [Effective Interventions to Mitigate Adverse Human Health Effects from Transportation-Related Air and Noise Pollution](#)
- [Health Risk of Escherichia coli Exposure in Fresh Water Beaches](#)
- [Health Effects from the Use of, and Exposure to, Tobacco and No-Tobacco Waterpipes](#)
- [Effect of Topical Anesthetics on Vaccine](#)

Rapid review decisions

Start	Change
17	20
Status Quo	Stop
6	6

Summary

EIDM:

- Taking root
- Extensive skill development
- Key investments
- Significant impact on decisions
- Bridging to frontline staff

References

1. Dobbins, M., et al. (2014). A tailored, collaborative strategy to develop capacity and facilitate evidence-informed public health decision making. Final Report, Partnerships for Health System Improvement. *Canadian Institutes of Health Research*.
2. Peirson, L, Ciliska, D, Dobbins, M and Mowat, D. Building capacity for evidence informed decision making in public health: a case study of organizational change. *BMC Public Health* 2012, 12:137
3. Ward, M. Evidence-informed decision making in a public health setting. *Healthcare Management Forum*, 2011, 24:S8-S11
4. Ward, M and Mowat D. Creating an organizational culture for evidence-informed decision making. *Healthcare Management Forum*, 2012, 25:146-150