Overview of Knowledge Translation
for Network for End of Life Studies (NELS)
Interdisciplinary Capacity Enhancement (ICE)
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[prepared by Dorothy R. Barnard]

Table 1 Understanding the policy making process

Institutional arrangements: ➢ Structures [e.g. jurisdictional authority] ➢ Past policies [e.g. administrative capacities] ➢ Policy networks [e.g. advisory committees]	Individuals: ➢ Attributes ➢ Relationships	**PUBLIC POLICY DECISIONS**
Interests: ➢ Elected officials [e.g. need a "win"] ➢ Civil servants [e.g. concerned about "turf"] ➢ Research groups [e.g. seeking research funding]	External events [e.g. election, recession]	
Ideas: ➢ Research/evidence- o Nature [e.g. systematic review] o Quality [e.g. trust in researcher] o Applicability [e.g. relevance] o Presentation [e.g. graded entry- CIHR 1, 3, 25 page formatting] ➢ Values ["ought" statements] ➢ Mixed		

[Lavis, 2006]

Table 2 Science based policy

Knowledge generation	**Knowledge exchange**	**Knowledge uptake**
➢ Credible design	➢ Relevant content	➢ Accessible information
➢ Accurate data	➢ Appropriate translation	➢ Readable message
➢ Sound analysis	➢ Timely dissemination	➢ Motivated user
➢ Comprehensive synthesis	➢ Modulated release	➢ Rewarding outcome

[Choi, 2005]

Ideal World- linked processes

✓ Research processes
✓ Knowledge translation processes
✓ Policy-making processes

Table 3 Audience [user of research results]

"structure" of the audience	➢ Is the audience part of a structured group? ➢ Is the audience centralized or spread out? ➢ Is the audience accountable to another group? ➢ Will the audience have a stable structure over the next several years? ➢ Are there political quagmires associated with the group?
"power" of the audience	➢ What kind of decisions does the audience make? ➢ What potential impact can they have? ➢ How do they make decisions? ➢ What sources of information do they use? ➢ What is the group's past experience with incorporating research evidence in their decision-making processes? ➢ Do they have built in incentives for incorporating evidence in decision-making?
"issues" of relevance to the audience	➢ Are we aiming at micro- [care-providers], meso- [centres/ local] or macro- [provincial/ national] level decision-makers? ➢ What does an environment scan say about the future in the area of our research? ➢ How does that fit with our potential audience's issues? ➢ Do we expect our research results will be incompatible with the beliefs and expectations of the audience
"relationship" with audience	➢ Do we have the trust of the audience? ➢ Do we have rapport with the audience? ➢ Have we worked/ are we working together? ➢ Do we have a liaison for the audience? ➢ How frequently do we interact with the audience? ➢ Has an agreement with the audience been formulated regarding the desired outcomes of knowledge translation?
"knowledge exchange" with audience	➢ Where can we "meet" the audience to exchange information? ➢ Will the "meeting" be formal? Informal? Variable? ➢ Will the "meeting" be face-to-face? Virtual? On paper- targeted to audience? In public domain? ➢ Will there be multiple modes? ➢ How does the audience wish to exchange information? ➢ What can we afford? ➢ How can we achieve the greatest benefit from the resources available to us?
Common audiences, common themes	➢ Generic approaches ➢ Project specific approaches ➢ Shared resources

Jacobson et al, 2003

Table 4 Clinicians are different

	Awareness	Agreement	Adoption	Adherence
Predisposing	Printed materials; journals; media; lectures; rounds; conferences			
Enabling		Opinion leaders; small group sessions	Small group sessions; academic detailing; care-paths; algorithms	
Reinforcing			Small group sessions for audit feedback	Reminders

Davis et al, 2003

Innovations more likely to be adopted

- Demonstrable advantage over the present
- Compatible with user's beliefs
- Not too complex
- Able to be trialed before complete acceptance
- Results in observable change

[Dobbins et al, 2002]

Kinds of evidence

- Clinical outcomes & appropriateness evidence
- Implementation evidence- e.g. readiness for change
- Organizational evidence- e.g. capacity for change
- Attitudinal evidence- e.g. acceptance of need for change
- Forecast evidence- e.g. environmental scan
- Economic/ financial evidence- e.g. resources available for change
- Ethics evidence- e.g. direction of change is ethical
- Political evidence- e.g. how public will react to change

Contexts for evidence

- Professional experience & expertise
- Political judgment
- Resources
- Values
- Habits & traditions
- Lobbyists & pressure groups
- Pragmatics & contingencies

[Lomas, presentation, 2006]

Messenger

- Opinion leader- internal expert, social influence
- Facilitator- internal or external, problem-solving model [e.g. workshops]
- Champion- internal persuasion, social influence
- Linking agent [knowledge broker]- translator between two communities, usually external, interaction
- Change agent- expertise, change behaviour, internal or external

[Thompson et al, 2004]

Table 5 Knowledge translation principles and rationale

KT Principle	Rationale
Collaborative research partnerships	Incorporation of the knowledge, skills and attitudes of all stakeholders throughout the development of the project will enhance capacity-building for all and increase ownership in and active support for the project. Relationships and interactions have been shown to increase adoption of evidence into practice [Lavis et al, 2002; Lomas, 1993]
Interpretation of research literature and study results within local context	By summarizing the available literature related to the topic and placing the project results both within the larger context and within the local context can increase credibility of project results, illustrate impact on population of concern and increase comfort of local decision-makers about the applicability to their area
Alignment with current strategic priorities	By emphasizing how this project contributes to the goals of the Department of Health, for example, can enhance the use of the research to affect policy as desired
Use of existing organizational activities	Use current resources to supplement the research to turn problems into solutions
Address issues of concern to decision-makers	Understanding the issues faced by decision-makers enables pro-active generation of information related to the research project
Work through credible champions	Credible champions enhance the integrity of the research and are a priori more acceptable to the intended audience
Use conceptual frameworks and the language of decision-makers	It's always easier to understand new information if it's presented in a format and language with which you are already familiar. Include in the document a glossary of unfamiliar terms
Gather evidence relevant to decision-makers	Tailored information can be used to address concerns or questions of decision-makers
Develop a concrete and feasible strategic plan	Detailed planning, particularly for new or difficult to convey information, can facilitate or enable an effective presentation of the study results, impacts and recommended actions. Consideration of potential barriers can allow for mitigating approaches
Have effective communication strategies	The CIHR 1-3-25 format has been shown to be effective. It forces the researcher to carefully consider the most important messages and action items

Bowen, 2006.

Table 6 Barriers and potential solutions- policy-/decision-makers

Barrier	Potential solution
Competing and conflicting demands	Where feasible, integrate research-generated actions into presently existing agenda. Promote actions as strategies for meeting organizational goals, not as new programs
Limited knowledge of decision-makers in area	Prepare clear concise information sheets
Isolation from other authorities or organizations	Prepare information on strategies adopted by other similar Canadian organizations
Limited resources to identify, retrieve, read, synthesize and translate available evidence	Rigorous systematic reviews. Results translated into actionable recommendations. Readily available when needed by decision-makers
Credibility and reliability of information	Build on reputation and develop an easily recognizable and familiar logo. Present materials in a consistent way from one project to the next
Quality and timing of information	Up-to-date, framed within the local context, jargon-free. Recommendations listed in rank order of effectiveness. Cost analysis included. Related to current priorities of user agency
Applicability and customizability	Applicable to current decisions. Presented with desired amount of detail and format [i.e. pdf file, internet, hard copy]. Only pertinent information provided
Education on research use	Provision of education/ capacity development workshops/seminars/education sessions
Perceived value of information	Highlight the benefits compared to costs of utilizing the research results in policy and program planning
Knowledge incompatibility	Where possible, framing the information to increase congruence with the user's values, context, skills, resources and prior investments
Selective [inappropriate] use of research evidence	Tailoring of information to user delivered through two-way in person interactions can lead to **bias of research** to which users are exposed. This can be counteracted through long-term relationships, increasing skills of users in critical analysis and presenting information in a context of valid systemic review as well as local environment
Allowable expenses for knowledge translation	Ensure adequate funds are requested for justifiable knowledge translation
Greater "expense" for new investigators	Partner with established investigators to gain credibility, expertise, knowledge and skills to enable access to potential users of the research
Interventions to increase utilization are costly	"Strategic use" of KT budget
The more tailored the approach, the greater the costs	Balance costs with expected effectiveness of intervention.

Landry et al, 2001; Hanney et al, 2003; Dobbins et al, 2004; Bowen, 2006; Landry et al, 2006]

Table 7 Steps up the "ladder of research utilization"

Step	
1	Transmission- results sent to applicable users
2	Cognition- results understood by applicable users
3	Reference- results referred to in reports, studies and strategies of action produced by applicable users
4	Effort- attempts made to incorporate into work of applicable users
5	Influence- results influenced the decisions of applicable users
6	Application- applicable users built on the research results

Landry et al, 2001

Factors to step onto first rung of the ladder

- Quantitative>qualitative
- Focus on advancement of scholarly knowledge
- External funding
- Users' context amenable
- Adaptation of products
- Dissemination efforts
- Linkage mechanisms

Table 8 Factors impacting climb up the "ladder of research utilization"

Facilitation factors	
Receptivity of users to research [from transmission to influence]	
Funding from sources external to the organization [from transmission to adoption]	
Context within which users function [from transmission to influence]	
Adaptation of products [from influence to application]	Reports readable, in "language of user", actionable recommendations
Increased dissemination efforts [from cognition to reference]	Dissemination- customized, multi-modal
Linkage mechanisms [transmission to cognition]	Informal personal contacts, participation in committees, transmission of reports to non-academic organizations

Landry et al, 2001; Landry et al, 2006

Table 9 Research use- evaluation

Use	**To:**
Jurisdictional/ governmental	Establish jurisdictional responsibilities and accountabilities
Service delivery	Determine how services will be delivered, by whom, in what settings, how accessed
Program content	Delineate which services will be provided and to whom
Evidence use in priorization	Decide areas of emphasis or spending
Evidence use in development	Incorporate in the design of programs
Evidence use in implementation	Inform processes of implementation
Instrumental	Solve a particular problem, change in behaviour/ practice
Conceptual	Inform indirectly or in concert with other evidence; general enlightenment

Lavis et al, 2002

Table 10 Knowledge transfer metrics

Measure	
Papers published and/or submitted	
Presentations and posters at conferences	
Articles in newsletters	
Visits to project websites	
Speaking invitations	
Media events, newspaper articles	
Requests for information, training materials, manuals, guidelines	

[The Change Foundation, 2003]

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