



Centre de liaison sur l'intervention
et la prévention psychosociales

LA TRANSFÉRABILITÉ DES SAVOIRS

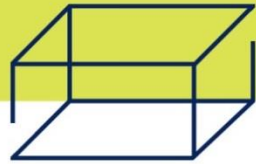
Ready or not?

Catherine Lord, Ph.D.

Inspiré du séminaire « Assessing Empirical Evidence for KT
Readiness: End of Grant Readiness Tool

Travis Sztainert, PhD Knowledge Broker, Content Specialist
September 29, 2016









Pourquoi je me pose cette question?

- ❖ Je suis chercheure de formation... j'ai fait de la recherche en neuroscience et en psychologie dans une autre où l'on craignait le bug de l'an 2000
- ❖ Constat que ce n'est pas toutes les recherches et les articles qui sont de même qualité
- ❖ Inconfort avec certains articles de journalisme scientifique
- ❖ Inconfort avec le TC dans les demandes de subventions (FRQ, IRSC, CRSH, etc)
- ❖ Augmentation astronomique des articles – ère numérique

A Rough Guide to SPOTTING BAD SCIENCE

Being able to evaluate the evidence behind a scientific claim is important. Being able to recognise bad science reporting, or faults in scientific studies, is equally important. These 12 points will help you separate the science from the pseudoscience.

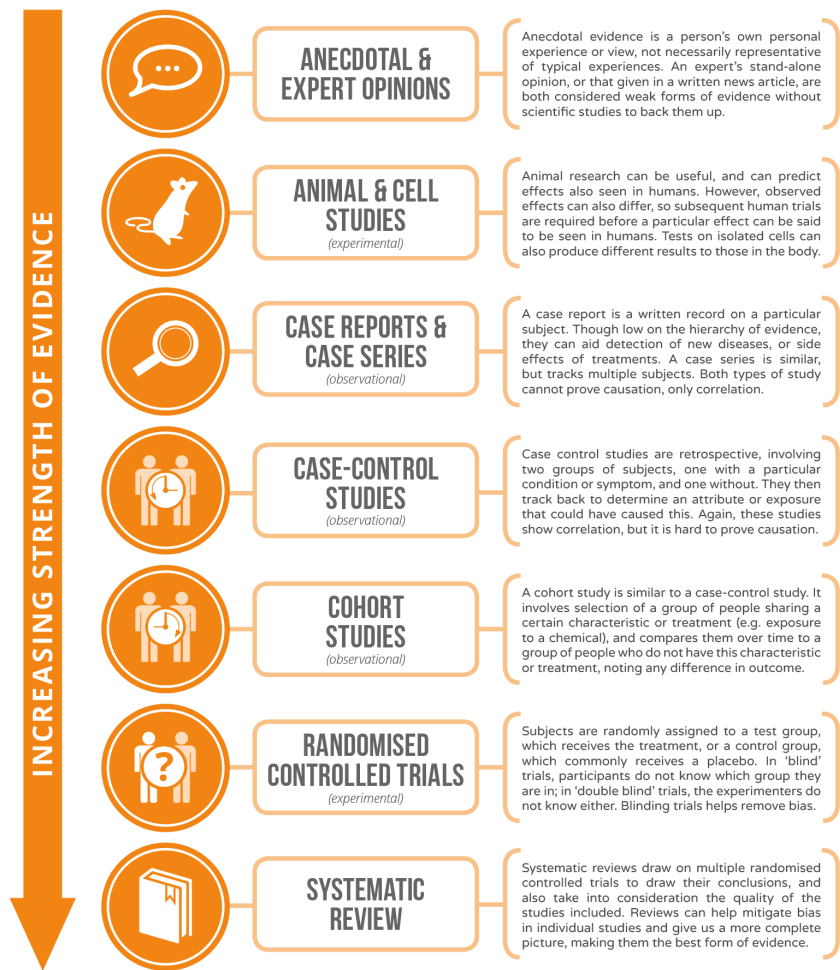
- 1. SENSATIONALISED HEADLINES**
 Article headlines are commonly designed to entice viewers into clicking on and reading the article. At times, they can over-simplify the findings of scientific research. At worst, they sensationalise and misrepresent them.
- 2. MISINTERPRETED RESULTS**
 News articles can distort or misinterpret the findings of research for the sake of a good story, whether intentionally or otherwise. If possible, try to read the original research, rather than relying on the article based on it for information.
- 3. CONFLICTS OF INTEREST**
 Many companies will employ scientists to carry out and publish research - whilst this doesn't necessarily invalidate the research, it should be analysed with this in mind. Research can also be misrepresented for personal or financial gain.
- 4. CORRELATION & CAUSATION**
 Be wary of any confusion of correlation and causation. A correlation between variables doesn't always mean one causes the other. Global warming increased since the 1800s, and pirate numbers decreased, but lack of pirates doesn't cause global warming.
- 5. UNSUPPORTED CONCLUSIONS**
 Speculation can often help to drive science forward. However, studies should be clear on the facts their study proves, and which conclusions are as yet unsupported ones. A statement framed by speculative language may require further evidence to confirm.
- 6. PROBLEMS WITH SAMPLE SIZE**
 In trials, the smaller a sample size, the lower the confidence in the results from that sample. Conclusions drawn can still be valid, and in some cases small samples are unavoidable, but larger samples often give more representative results.
- 7. UNREPRESENTATIVE SAMPLES USED**
 In human trials, subjects are selected that are representative of a larger population. If the sample is different from the population as a whole, then the conclusions from the trial may be biased towards a particular outcome.
- 8. NO CONTROL GROUP USED**
 In clinical trials, results from test subjects should be compared to a 'control group' not given the substance being tested. Groups should also be allocated randomly. In general experiments, a control test should be used where all variables are controlled.
- 9. NO BLIND TESTING USED**
 To try and prevent bias, subjects should not know if they are in the test or the control group. In 'double blind' testing, even researchers don't know which group subjects are in until after testing. Note, blind testing isn't always feasible, or ethical.
- 10. SELECTIVE REPORTING OF DATA**
 Also known as 'cherry picking', this involves selecting data from results which supports the conclusion of the research, whilst ignoring those that do not. If a research paper draws conclusions from a selection of its results, not all, it may be guilty of this.
- 11. UNREPLICABLE RESULTS**
 Results should be replicable by independent research, and tested over a wide range of conditions (where possible) to ensure they are consistent. Extraordinary claims require extraordinary evidence - that is, much more than one independent study!
- 12. NON-PEER REVIEWED MATERIAL**
 Peer review is an important part of the scientific process. Other scientists appraise and critique studies, before publication in a journal. Research that has not gone through this process is not as reputable, and may be flawed.

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A Rough Guide to TYPES OF SCIENTIFIC EVIDENCE

Being able to evaluate the evidence behind a claim is important, but scientific evidence comes in a variety of forms. Here, the different types of scientific evidence are ranked and described, particularly those relevant to health and medicinal claims.

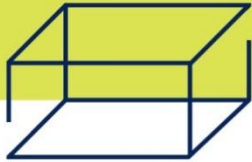


Note that in certain cases, some of these types of evidence may not be possible to procure, for ethical or other reasons.

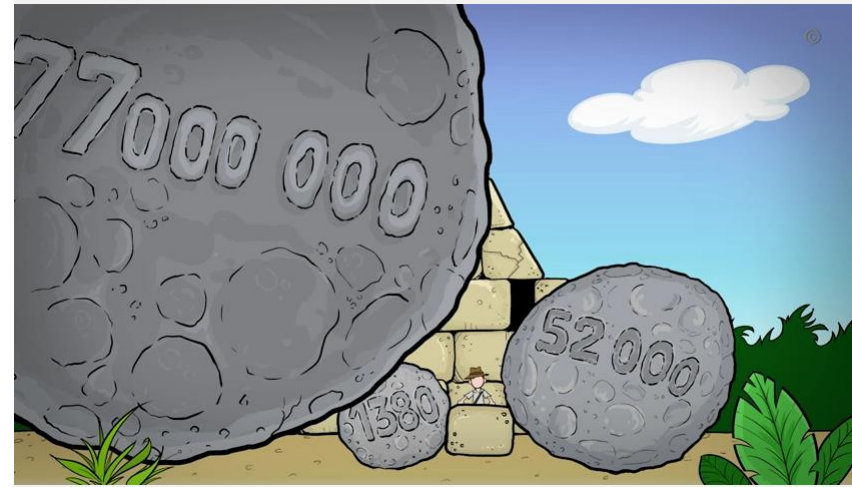


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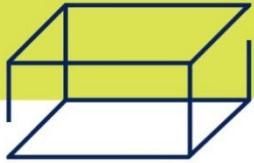




- ❖ **Plusieurs questions qui ne s'applique pas toujours de la même façon selon les domaines:**
 - ❖ **Quantités disponibles?**
 - ❖ **Synthèses disponibles?**
 - ❖ **Qualité des synthèses?**
 - ❖ **Récence?**
 - ❖ **Guidelines?**
 - ❖ **Accès ?**
 - ❖ **Compétences pour juger des articles?**



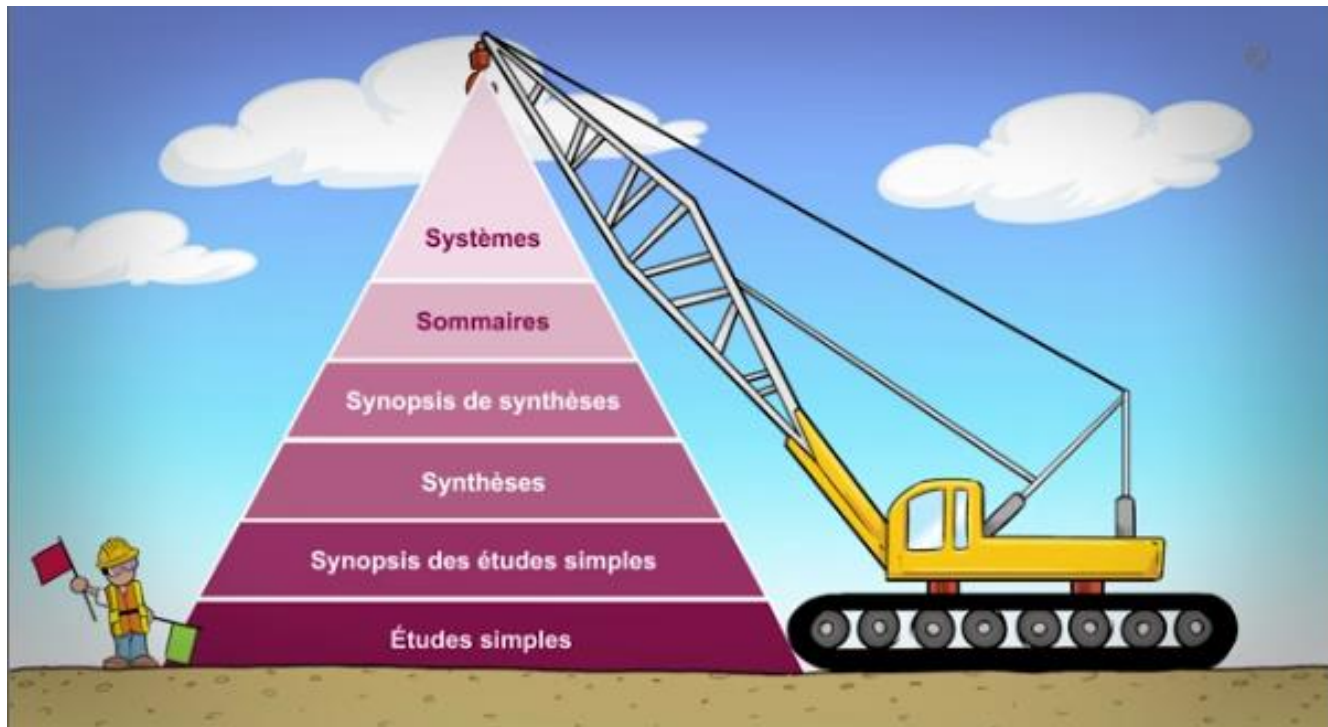
<http://www.nccmt.ca/fr/ressources/multimedia?v=157#ure1>



<http://www.nccmt.ca/fr/ressources/multimedia?v=157#ure1>

La pyramide des 6 S du NCCMT

❖ https://www.youtube.com/watch?time_continue=221&v=h8Q6T4EKH2Q





Grading of Recommendations Assessment, Development and Evaluation (GRADE)

❖ <http://www.gradeworkinggroup.org/>

Study design	Quality of evidence	Lower if	Higher if
RCT	High	Risk of bias: -1 Serious -2 Very serious	Large effect: +1 Large +2 Very large
	Moderate	Inconsistency: -1 Serious -2 Very serious	Dose response: +1 Evidence of a gradient
Observational study	Low	Indirectness: -1 Serious -2 Very serious	All plausible confounding: +1 Would reduce a demonstrated effect +1 Would suggest a spurious effect when results show no effect
	Very low	Imprecision: -1 Serious -2 Very serious	
		Publication bias: -1 Likely -2 Very likely	



KCE process book - Belgique

<http://processbook.kce.fgov.be/node/11>

Home Bibliography [Restricted access]

Home » KCE Process Book » METHODOLOGICAL APPROACHES » SEARCH FOR EVIDENCE (GCP - HTA)

7. Quality assessment of studies

Author(s): [Joan.Vluyen](#)
[Pascale.Jonckheer](#)

Critical appraisal of articles is a crucial part of a literature search. It aims at identifying methodological weaknesses and assessing the quality in a coherent way. The methodological assessment is based on a number of key questions that focus on those aspects of the study design that have a significant influence on the validity of the results reported and conclusions drawn. These key questions differ according to the study type, and a range of checklists can be used to bring a degree of consistency to the assessment process. The checklists for systematic reviews, randomized controlled trials, cohort studies and case-control studies discussed below were selected during several internal workshops at the KCE. The other checklists (for diagnosis studies for instance) will also be discussed.

The process of critical appraisal consists of an evaluation by two independent reviewers who confront their results and discuss them with a third reviewer in case of disagreement. However, because of feasibility it could be acceptable that one reviewer does the quality appraisal and that a second reviewer checks the other's work.

If necessary, the authors of the evaluated study should be contacted for additional information.

The results of the critical appraisal should be reported in a transparent way.

Co-author(s): [Jo.Robays](#)

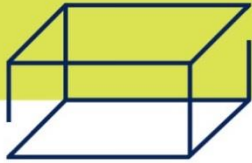
- [7.1. Critical appraisal of systematic reviews](#)
- [7.2. Critical appraisal of randomized controlled trials for interventions](#)
- [7.3. Critical appraisal of diagnostic accuracy studies](#)
- [7.4. Critical appraisal of observational studies](#)
- [7.5. Critical appraisal of guidelines](#)

< [6.2. Selection process](#) up [7.1. Critical appraisal of systematic reviews](#) >

Last changed: 10/12/2013

Book navigation

- ▼ KCE Process Book
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 - ▼ 7. Quality assessment of studies
 - 7.1. Critical appraisal of systematic reviews
 - 7.2. Critical appraisal of randomized controlled trials for interventions
 - 7.3. Critical appraisal of diagnostic accuracy studies
 - 7.4. Critical appraisal

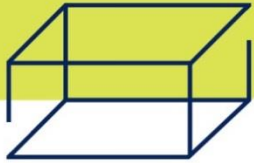


Mais les données probantes ce n'est pas que des évidences scientifiques!

- ❖ Les pratiques innovantes
- ❖ Les guides de pratiques
- ❖ Les données internes d'évaluation
- ❖ Les statistiques
- ❖ Les données terrain
- ❖ etc

The screenshot shows the website of the Institut national de santé publique Québec. The page title is « Qu'est-ce qu'une donnée probante? » Une perspective philosophique. The page content includes a summary of a presentation by Daniel Weinstock, a list of related links, and a download button for a PDF document. The website header includes the logo of the Institut national de santé publique Québec and navigation links such as Accueil, Site de l'INSPQ, Portail Québec, and English. The page also features a search bar and a sidebar with additional resources.

http://www.ccnpps.ca/docs/Weinstock_Donn%C3%A9eProbante_Fr.pdf

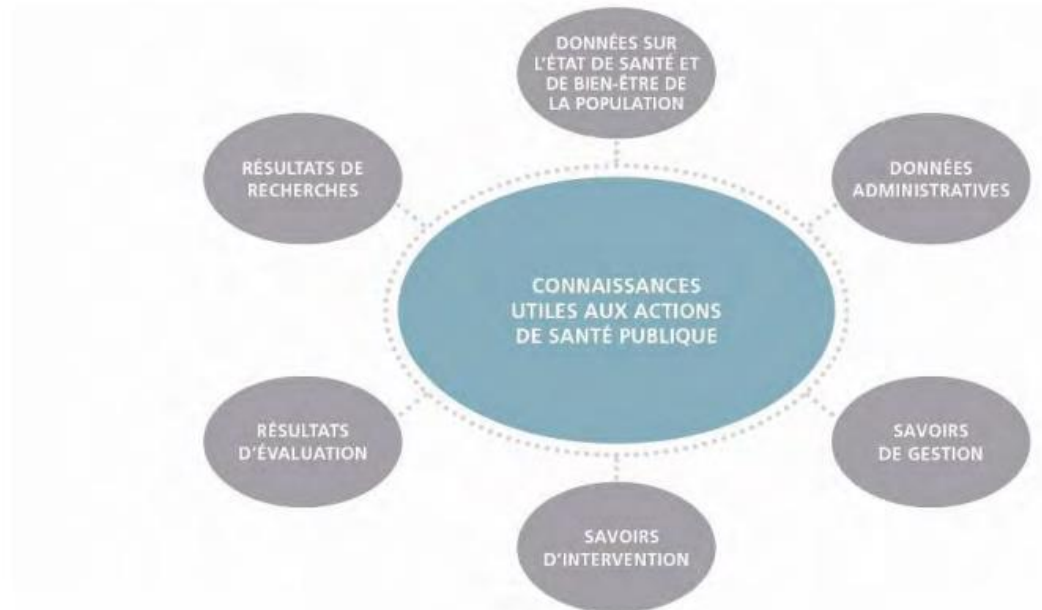


Autre exemple

INSPQ – Animer un processus de TC, 2009 (p.7-11)

- ❖ https://www.inspq.qc.ca/pdf/publications/1012_AnimerTransfertConn_Bilan.pdf

Figure 1 Différents intrants à la base de la production de connaissances utiles et pertinentes aux actions de santé publique





Le modèle de prise de décisions fondée sur des données probantes (PDFDP) du CCNMO prend en compte cette complexité et illustre les nombreux types de données probantes qui influencent les décisions de santé publique.

- ❖ <https://www.youtube.com/watch?v=XrZjc3Flrz8>
- ❖ **Importance de la pertinence dans l'analyse? Du contexte ?**



Agence de la santé publique du Canada

www.santepublique.gc.ca

English | Accueil | Contactez-nous | Aide | Recherche | Canada.ca

Accueil > Maladies chroniques > Prise de décision fondée sur des données probantes : Guide des possibilités d'apprentissage et de formation

Menu principal

- À propos de l'Agence
- Maladies infectieuses
- Maladies chroniques
- Santé des voyageurs
- Aliments
- Immunisation et vaccins
- Mesures et interventions d'urgence
- Promotion de la santé
- Prévention des blessures
- Biosécurité en laboratoire
- Surveillance

Explorez

- Salle des médias
- Lois et règlements
- Rapports et publications
- Index A-Z

Transparence

- Organismes consultatifs externes

+/- TEXTE | IMPRIMER | PARTAGEZ

Prise de décision fondée sur des données probantes : Guide des possibilités d'apprentissage et de formation

L'Agence de la santé publique du Canada, en collaboration avec certains organismes partenaires, a élaboré un guide complet des possibilités d'apprentissage et de formation liée à la prise de décision fondée sur des données probantes en santé publique.

- Ateliers sur place
- Modules d'apprentissage en ligne

Ateliers sur place

Health-evidence.ca

Ateliers sur la pratique fondée sur des données probantes (Evidence-Informed Practice Workshops)

Ces ateliers visent à renforcer les capacités individuelles et organisationnelles. Les sujets abordés sont les suivants : introduction à la prise de décisions fondée sur des données probantes (PDFDP) (aperçu du processus, valeur de la PDFDP et façon de devenir des utilisateurs avertis de données probantes de recherche); évaluation critique; stratégies pour une recherche efficace de données probantes; utilisation des examens systématiques pour guider la prise de décisions; utilisation de ressources et d'outils pour soutenir la PDFDP; et gestion des connaissances aux fins de la PDFDP. <http://www.donneesprobantes-sante.ca/account/contactus/?language=fr>

Prix : Divers

Participants : Praticiens de la santé publique et professionnels de la santé

Format : Présentations interactives et activités en petits ou grands groupes pouvant être adaptées

Prise de décision fondée sur des données probantes : Guide des possibilités d'apprentissage et de formation

Prise de décision fondée sur des données probantes : Guide des possibilités d'apprentissage et de formation

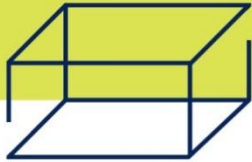


document PDF
680 Ko, 4 pages

Brochure - (Document PDF - 186 Ko - 2 pages)

*Aide pour les documents en format PDF

<http://www.phac-aspc.gc.ca/cd-mc/publications/eidm-pdf-fra.php>



ETMI

❖ https://www.inesss.qc.ca/fileadmin/doc/INESSS/ServicesSociaux/UETMISS_2011/UETMISS_AideMemoire.pdf

AIDE-MÉMOIRE

De la question décisionnelle à la définition de la question d'évaluation

CARACTÉRISTIQUES D'UNE ÉTMI

UNE ÉTMI:

- est réalisée dans un délai relativement court afin d'offrir une réponse en temps opportun;
- tient compte des éléments du contexte propre à l'enjeu décisionnel;
- s'appuie idéalement sur une large consultation des parties prenantes;
- utilise des données secondaires, issues de revues systématiques;
- se réfère à des données primaires dans le seul but de mettre en contexte les résultats de la revue systématique;
- permet de tirer des conclusions uniquement quant à la technologie ou à l'intervention dont il est question.

L'ÉVALUATION DES TECHNOLOGIES ET DES MODES D'INTERVENTION EN SERVICES SOCIAUX

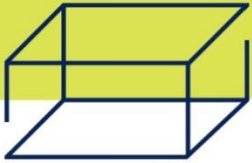
INESSS
LE SAVOIR PREND FORME

Cet aide-mémoire a pour objectif de décrire succinctement les premières étapes du

Aide-mémoire rédigé dans le cadre des rencontres du comité UÉTMISS

DE LA QUESTION DÉCISIONNELLE À LA DÉFINITION DE LA QUESTION D'ÉVALUATION

L'évaluation des technologies et des modes d'intervention (ÉTMI) est de plus en plus valorisée par les décideurs du domaine de la santé et des services sociaux. À l'échelle mondiale, le recours à l'ÉTMI a augmenté de façon croissante au cours des dernières décennies comme en témoignent les nombreux réseaux, instituts

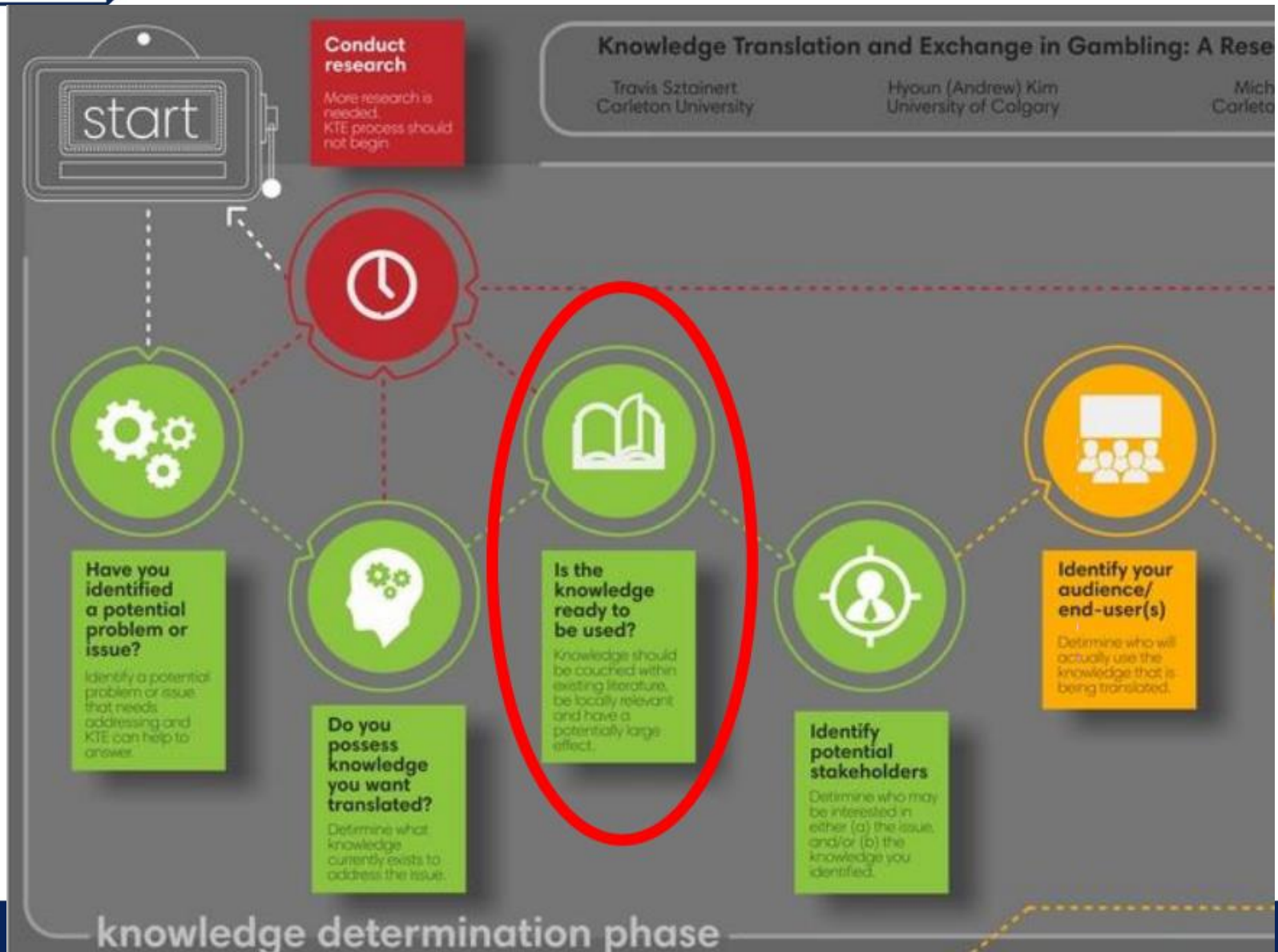


Wébinaire du 29 septembre dernier

- ❖ « Assessing Empirical Evidence for KT Readiness: End of Grant Readiness Tool
- ❖ Travis Sztainert, PhD Knowledge Broker, Content Specialist September 29, 2016
- ❖ Pour écouter le webinaire au complet :
<http://kter.org/resources/webcast-kte> ou
<https://www.youtube.com/watch?v=zVDcJvyM1w0&feature=youtu.be>



<http://drszt.ca/knowledge-translation.html>

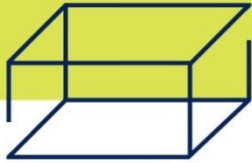




Identified Need

- There is (as far as I'm aware), no systematic way for individuals or organizations to assess "KTE Readiness"
- Some sort of checklist or tool is needed





Literature?

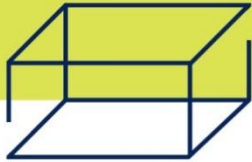
- *Knowledge translation in health care: Moving from evidence to practice* (Straus, Tetroe & Graham, 2013)
 - “When considering end of grant KT activities, it is critical to consider the strength of the evidence and its significance and tailor our strategies as appropriate.”
 - “The strength and significance of the research findings should determine the magnitude and extent of the knowledge translation (KT)”
 - “Decisions about the extent and ambitiousness of KT plans should be guided by the reliability, validity, strength, and significance of research findings.”



Overarching Criteria

1. The evidence in-hand is couched within a larger body of work, and exists within a solid foundation of valid, high-quality theory and research.

- Do not place excessive emphasis on the results of single small studies, studies of poor methodological quality, or ones where the strength of the evidence is low
 - Helps to address cherry-picking and media-bias
- Important that the knowledge (be it from a primary study or systematic review) be of high quality
 - What is knowledge?
 - Rigor vs. Relevance
 - Research vs. Practice Based Evidence → What happens if the disagree
- Some authors argue that knowledge synthesis (systematic reviews) should be considered the base unit of knowledge translation



Overarching Criteria

2. The evidence is relevant/appropriate for the targeted domain of use.

- Evidence should be considered of major significance to knowledge users
- Evidence should be locally relevant and adaptable to its targeted domain of use

3. The evidence will have a significant impact on the knowledge-users or system.

- If evidence has the opportunity to greatly impact the health or well-being of the knowledge users, it is worth furthering KT efforts
 - Especially true if the knowledge has potential impact to save lives or reduce mortality rates (either directly, or via changes to systems)

L'éthique du TC .
Minute 17 du vidéo
N'est pas dans l'outil
pour l'instant « too
muddy »



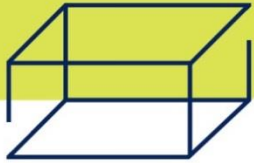
Tool Layout

- Two distinct factors
 - (1) the strength/quality of the evidence
 - (2) the significance of the evidence
- Therefore, tool is divided into two sections:
 - QUALITY AND STRENGTH OF EVIDENCE
 - SIGNIFICANCE OF EVIDENCE
- Each section contains scoring criteria, which is then summed and results in one of three readiness outcomes



http://kter.org/site/s/default/files/webcast_092716.pdf

END-OF-GRANT READINESS TOOL		
INITIAL CONSIDERATION		POINTS
What is the empirical basis of (i.e. evidence for) the knowledge?	Knowledge Synthesis	
	Meta-analysis	10
	Systematic Review	8
	Critically Appraised Synthesis	6
	Primary Research	
	Randomized Controlled Trial	4
	Cohort, case-controlled or epidemiological	2
	Observational	1
QUALITY AND STRENGTH OF EVIDENCE		
Is the empirical evidence high quality (methodologically or otherwise)?	YES	Up to +10
	NO	Up to -10
Is the evidence in line with an existing body of knowledge, or couched within an existing literature?	YES	+5
	LIMITED	0
	NO	-5
What is the estimated effect size of the outcome? Thresholds Compute	LARGE	+7
	MEDIUM	+4
	SMALL	0
	UNKNOWN	-2
Was the sample size adequate to detect the discovered effect size? Power analysis	MORE	+5
	ADAQUATE	+1
	UNKNOWN/LESS	-5
Is the evidence ecologically valid?	YES	+3
	NO	0
	UNKNOWN	-1
SIGNIFICANE OF EVIDENCE		
Note: You may need to consult stakeholders or knowledge-users to help you answer some of these questions.		
Does the evidence fill a KU knowledge 'gap' or 'need'?	YES, determined via a specific request	+15
	YES, determined via needs assessment or formal consultation	+8
	YES, determined via local opinion	+6
	NO	-15
Can the evidence be applied to the target population?	YES	+5
	MAYBE - Can be adapted	+4
	NO	-2
Does the evidence directly address the desired change (in beliefs, attitudes, behaviour etc.)?	YES	+5
	TANGENTALLY	0
	NO	-5
Does the evidence provide a new, novel or innovative way to address a desired change?	YES	+5
	NO	0



Readiness Outcomes

- Sum the score, and compare to the outcomes table:
- Low readiness = More research + Passive dissemination
- Moderate readiness = Active dissemination
- Higher readiness = Implementation



Readiness Outcomes



-27 à 0

- Low readiness to translate
 - The evidence is not yet ready to be translated.
 - More, high quality, highly significant research needs to be conducted.
 - Passive dissemination (also called diffusion) strategies are appropriate.
 - In addition, stakeholders should be consulted to make sure results of future research will be of value.
- Examples:
 - Presentations at academic conferences, or sharing the knowledge on research-centered media
 - Hold a focus group to with knowledge-users and stakeholders to try and determine what their most pressing, upcoming issues are

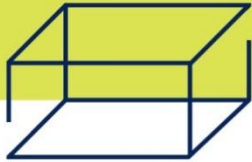


Readiness Outcomes



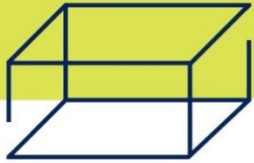
1 à 30

- Moderate readiness to translate
 - Ready for more active approaches to dissemination.
 - Targeting audiences other than researcher may be useful. Examples include clinicians, funders, members of the public or policy makers.
- Active dissemination approaches may include:
 - “tailoring the message and medium to the specific audience; linking researchers and knowledge users through linkage and exchange mechanisms, such as small workshops focused on the dissemination of a synthesized body of knowledge or those focused on developing a user-driven dissemination strategy; engaging media; using knowledge brokers; or creating networks or communities of practice involving both researchers and knowledge users.”



31 à 60

- High readiness to translate
 - The evidence may be highly useful, and therefore should go beyond the regular means of dissemination.
 - Consider implementation of evidence into practice.
 - For implementation, you need to decide if you want to use the knowledge to promote change in attitudes, behavior or influence decision making.
- Examples:
 - You may want to start with a small scale pilot project, targeting a population in a local setting. Make sure to get early involvement of knowledge-users and stakeholders.



Questions-discussions

- ❖ **Pensez-vous que les savoirs doivent être évalués avant d'être transférés?**
- ❖ **Comment évaluez-vous la qualité et la pertinence perçue des savoirs à transférer? (qui?, comment?, quand?)**
- ❖ **Est-ce que la qualité et la pertinence perçue des savoirs influencent vos choix de stratégies de TC? Si oui, comment?**