

Section 6.2

Economic Evaluation of Knowledge Translation

Deborah J. Kenny, LTC, AN, USA, RN, PhD

Executive Director, TriService Nursing Research Program
Uniformed Services University of the Health Sciences
Bethesda, MD

Evelyn Cornelissen, RD, PhD(c)

University of British Columbia – Okanagan
Faculty of Health and Social Development

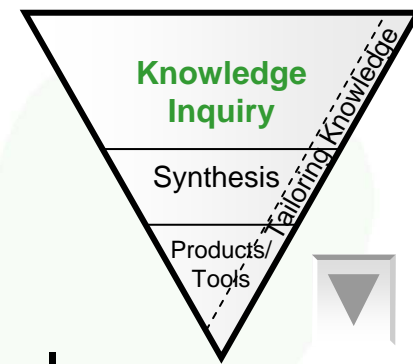
Craig Mitton, PhD

Canada Research Chair, Health Services Priority Setting
Assistant Professor, University of British Columbia – Okanagan





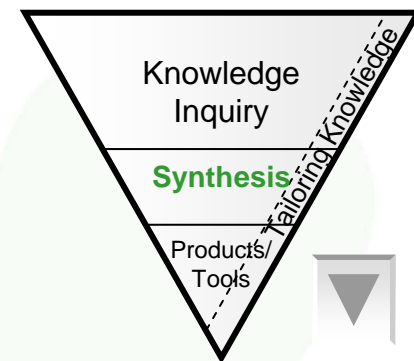
Knowledge Inquiry



- There is an increasing demand for clinical decisions and policy to be led by economic factors (Kernick, 1998)
- Outcomes based on knowledge translation need to be quantified economically (Kennedy & Stokes, 2003; Ramsey & Sullivan, 1999)
- Practitioners hesitate to include economic data because of a lack of understanding or inability to interpret such information (Williams, McIver, Moore & Bryan, 2008)



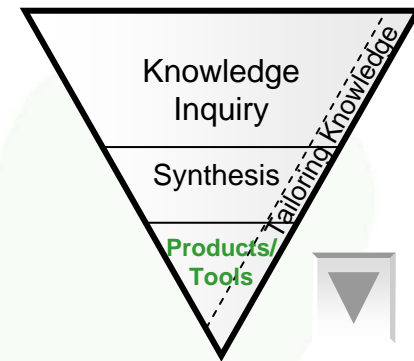
Synthesis



- While economic analysis is becoming more prevalent, there is a need for methodological consistency in applying cost principles to knowledge translation (Hagberg & Lindholm, 2006)
- Economic evaluation is infrequently included in guidelines (Coyle & Graham, 2003; Vetter, 2007)

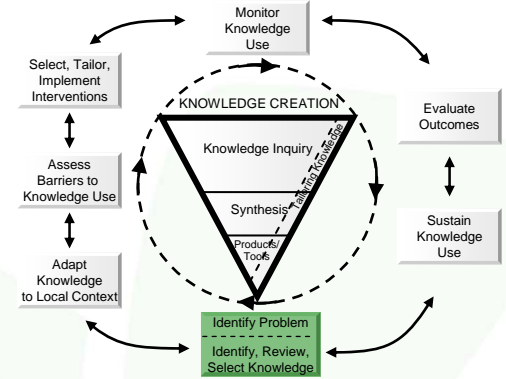
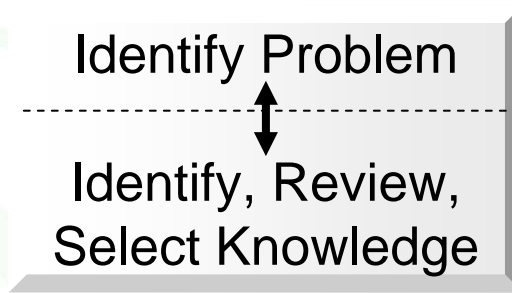


Products / Tools



- Three types of economic evaluation seem best suited to KT in healthcare:
 - Cost-effectiveness analysis:
 - Outcomes measured in “natural units” such as life-years gained or numbers of cases detected
 - Cost-benefit analysis:
 - Determining the “worthwhileness” of an intervention
 - Cost-utility analysis:
 - Comparing an intervention effect of two or more dimensions such as Quality Adjusted Life Year, where both length and quality of life are considered

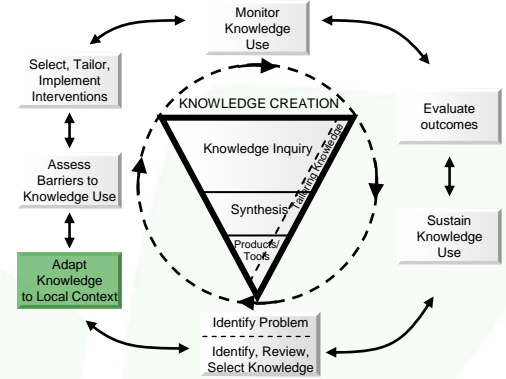




- Resource demand can exceed resource availability necessitating choices between competing demands
- This begs the following questions regarding economic consideration in KT:
 - When assessing specific interventions, how can costs be included as outcomes?
 - When allocating healthcare resources, what role does KT play?



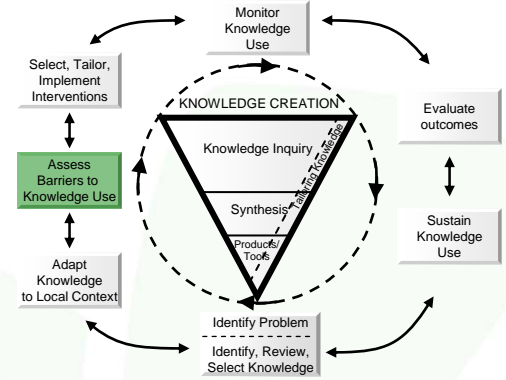
Adapt Knowledge to Local Context



- Determine relevant costs and benefits that are specific to the context, i.e., individual, organization, community, society at large
- Consider direct and indirect costs
 - Direct - Resources consumed by the intervention, i.e., cost of prescriptions, cost of equipment
 - Indirect - Costs as a consequence of the intervention, i.e., time/productivity loss, transportation costs
- Local cost and consequence data should be used when available



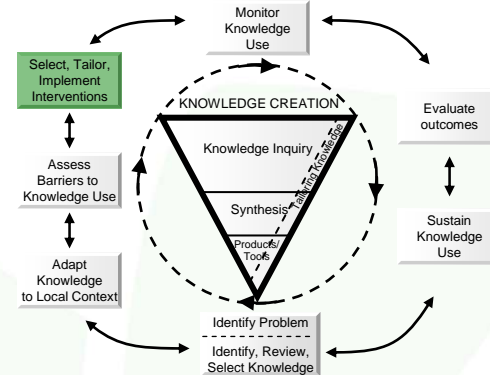
Assess Barriers to Knowledge Use



- Most healthcare providers are generally not knowledgeable about economic principles
- Use of economic information is found inconsistently within the literature (Coyle and Graham, 2003; Vetter, 2007)
- There are methodological weaknesses inherent in reports, often leading to incorrect assumptions about effectiveness of an intervention (Hagberg and Lindholm, 2006)



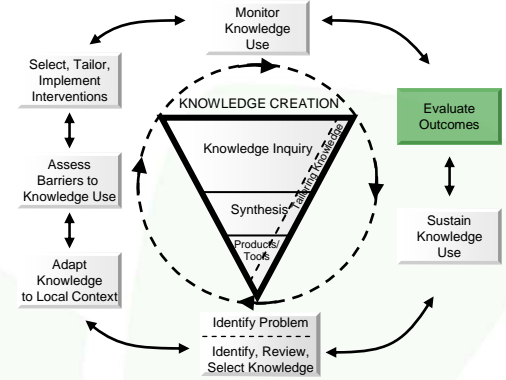
Select, Tailor, Implement Interventions



- There is a need to promulgate the use of and dissemination of economic information
 - Determine parameters for economic evaluation of evidence-based interventions and clinical guidelines
 - Determine which existing templates offer the most beneficial information for use
 - Educate practitioners in basic economic principles and their application

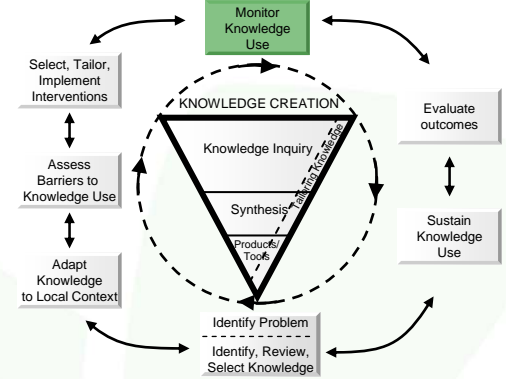


Evaluate Outcomes



- Evaluate the literature for increased use of economic data within reports
- Evaluate the literature for appropriate cost principles within reports

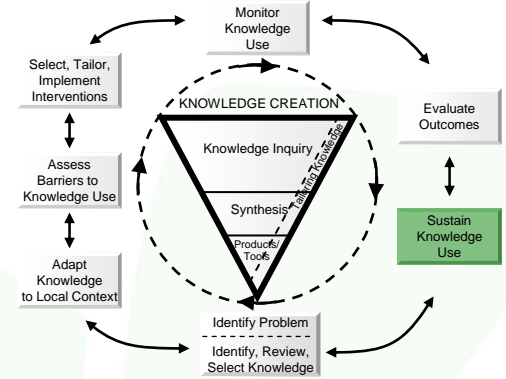
Monitor Knowledge Use



- Monitor use of cost and consequence info alongside evaluation of KT strategy or to inform decisions, e.g. in priority setting.
- Use of incremental ratios
 - Quantify through the analysis costs and benefits throughout different phases of the program
 - Based on the economic evaluation used to make implementation decisions, compare change in cost to change in the benefits of the intervention
- Assess both the resource use and expected benefits of various interventions. These include both the change in clinician practice and the health outcome changes at the client level attributed to the change in care.



Sustain Knowledge Use



- Economic evaluation provides a way of thinking rather than a definitive solution to a particular problem.
- Further work is needed to determine parameters for evaluation, to make recommendations for appraisal of implementation studies, and to determine how best to influence the use of existing templates for economic evaluation.



References

- Centre for Reviews and Evaluation. (2008). NHS Economic Evaluation Database. Retrieved July 2, 2008 from <http://www.york.ac.uk/inst/crd/crddatabases.htm>
- Coyle D, & Graham ID. (2003). The role of economics in Canadian clinical practice guidelines for drug therapy. *Disease Management and Health Outcomes*, 11, 45-48.
- Donaldson C, Currie G, & Mitton C. (2002). Cost effectiveness analysis in health care: Contraindications. *BMJ*, 02/10/19, 325(7369), 891-4.
- Drummond M, Sculpher M, Torrance G, O'Brien B, & Stoddart G. (2005). *Methods for the economic evaluation of health care programmes, 3rd ed.* Oxford: Oxford University Press.
- Greenhalgh, T. (2006). *How to Read a Paper, the basics of evidence-based medicine, 3rd edition.* USA: Blackwell Publishing Ltd.



References

- Hagberg LA, & Lindholm L. (2006). Cost-effectiveness of healthcare-based interventions aimed at improving physical activity. *Scandinavian Journal of Public Health*, 34, 641-653.
- Helfand M. (2005). Incorporating information about cost-effectiveness into evidence-based decision making: The evidence-based practice center (EPC) model. *Medical Care*, 43 (7) suppl, 33-43.
- Kennedy N, & Stokes E. (2003). Discussion paper: Why physiotherapy needs economics. *Physical Therapy Reviews*, 8, 27-30.
- Kernick DP. (1998). Economic evaluation in health: A thumb nail sketch. *BMJ*, 316, 1663-1665.
- Mason J, Eccles M, Freemantle N, & Drummond M. (1999). A framework for incorporating cost-effectiveness in evidence-based clinical practice guidelines. *Health Policy*, 47, 37-52.



References

- McIntosh E, Donaldson C, & Ryan M. (1999). Recent advances in the methods of cost-benefit analysis in healthcare: matching the art to the science. *Pharmacoeconomics*, 99/04, 15(4), 357-67.
- Mekhail NA, Aeschbach A & Stanton-Hicks M. (2004) Cost benefit analysis of neurostimulation for chronic pain. *The Clinical Journal of Pain*, 20, 462-468.
- Mortimer D, French S, McKenzie J, O'Connor D, & Green S. (2008). Protocol for economic evaluation alongside the IMPLEMENT cluster randomized control trial. *Implementation Science*, 3, 12.
- National Guideline Clearinghouse. (2008). Retrieved 9 July 2008 from, <http://www.guideline.gov/submit/template.aspx>
- Niven KJM. (2002). A review of the application of health economics to health and safety in healthcare. *Health Policy*, 61, 291-304.



References

- Ramsey SD, & Sullivan SD. (1999). Weighing the economic evidence: Guidelines for critical assessment of cost-effectiveness analyses. *Journal of the American Board of Family Practice*, 12(6), 477-485.
- Starfield B, Hyde J, Gervas J, & Heath I. (2008). The concept of prevention: A good idea gone astray? *Journal of epidemiology and community health*, 62, 580-583.
- Vetter TR. (2007) The application of economic evaluation methods in the chronic pain medicine literature. *Anesthesia and Analgesia*, 105(1), 114-118.
- Williams I, McIver S, Moore D, & Bryan S. (2008). The use of economic evaluations in NHS decision-making: A review and empirical investigation. *Health Technology Assessment*, 12, iii-63.

