Knowledge to action Des connaissances à la pratique

Section 3.1

The Action Cycle

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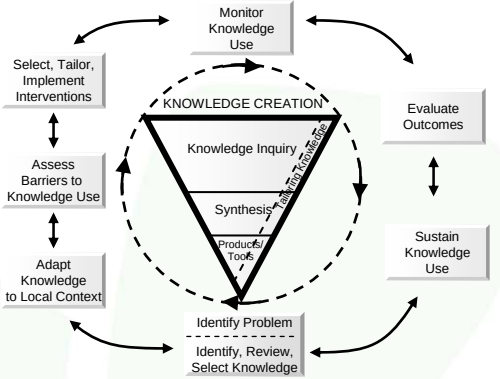
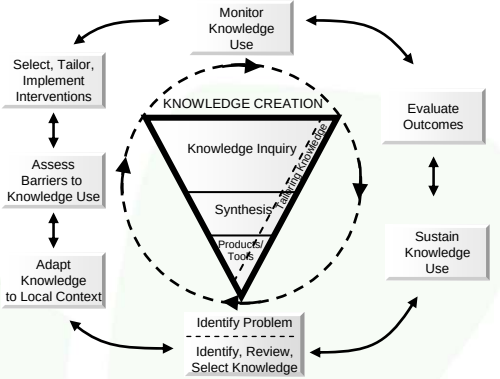
The Action Cycle



- The action cycle is the process by which knowledge is implemented
- The “Action Cycle” represents phases of activities that, according to planned-action theories, are needed for knowledge applications to achieve a deliberately engineered change in groups that vary in size and setting

The 7 Phases of the Action Cycle



1. Identifying the Knowledge-To-Action Gaps

- Identification of the knowledge-to-action gaps (knowledge needs) is the starting point of knowledge implementation
- This process should involve rigorous methods and engage relevant stakeholders

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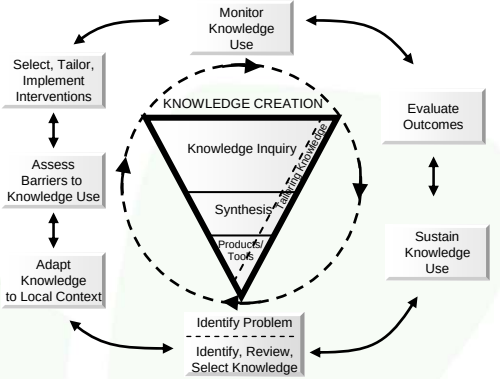

1. Identifying the Knowledge-To-Action Gaps (con't)

- Strategies for needs assessments depend on the
  - purpose of the assessment
  - the type of data
  - available resources
  - whether the needs are subjectively or objectively measured
- Needs assessments can occur from the perspective of the
  - population
  - organization
  - health care provider

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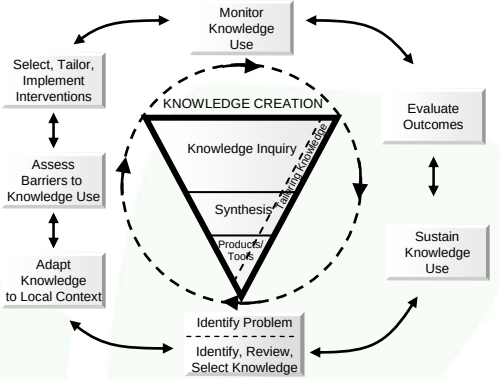

1. Identifying the Knowledge-To-Action Gaps (con't)

- Examples:
  - Reducing antibiotic prescription in the community by the prudent use of antibiotics is seen as one way to slow the rise in antibiotic resistance and appears safe
  - However, our understanding of HOW best to achieve this is limited

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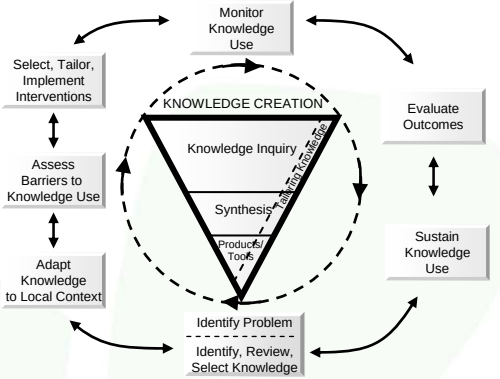

2. Adapting Knowledge to Local Context

- Any knowledge must be adapted to local settings to ensure it is relevant and feasible
- For example, although guidelines provide evidence in a more usable form for practitioners and health settings than a plethora of primary studies, the adaptation of the guideline to the context of use is a necessary step
  - Customizing a clinical practice guideline for a particular organization may help improve acceptance and adherence

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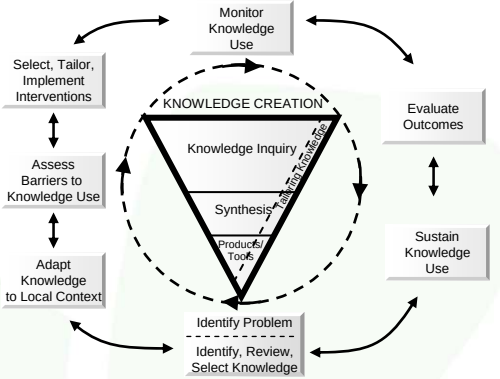

2. Adapting Knowledge to Local Context (con't)

- Example:
  - In the contemporary West (where absolute rates of complications are lower) the number needed to treat to benefit will rise above a rate at which it might be regarded as worthwhile to treat, and thus the guideline suggests that antibiotic should not be prescribed to healthy adults
  - However, in low-income countries where the absolute rate of complications may be much higher, the lower number needed to treat to benefit will mean antibiotics are more likely to be effective
  - Hence the previous guideline of prescribing antibiotic will need to be adapted to the low-income community

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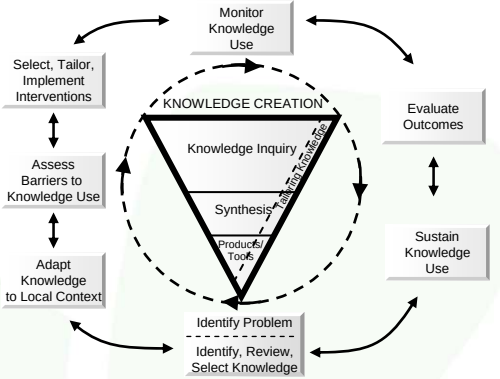

3. Assessing Barriers/Facilitators to Knowledge Use

- Methods to access barriers and facilitators to knowledge use include:
  - The Delphi procedure (to achieve consensus among a panel of experts)
  - Qualitative approaches such as focus groups, interviews, and questionnaires
  - Statistical analysis on observational dataset by regressing potential determinants of variation in health care delivery
  - Statistical analysis of multiple studies concerning guideline implementation to determine factors that account for the heterogeneity of effects across studies

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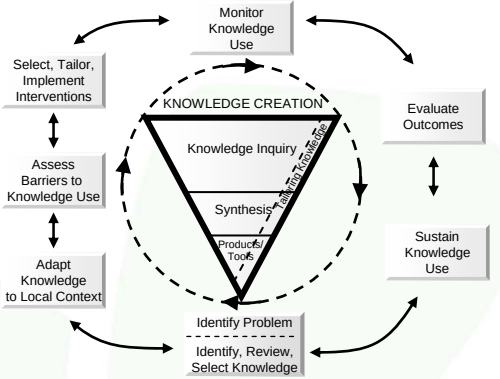

3. Assessing Barriers/Facilitators to Knowledge Use

- Examples:
  - Lack of awareness
  - Current (habitual) practices

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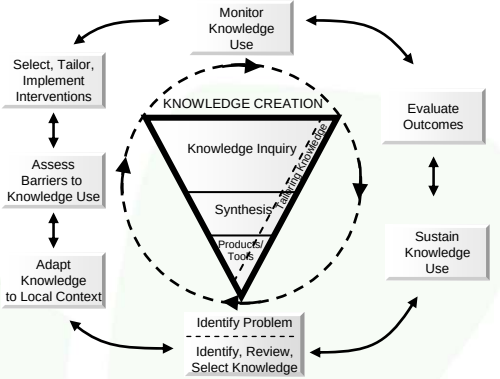

4. Selecting, Tailoring, Implementing Interventions

- Knowledge translation interventions need to be tailored to specific barriers for change, similar to a clinical treatment that is tailored to a diagnosed health problem

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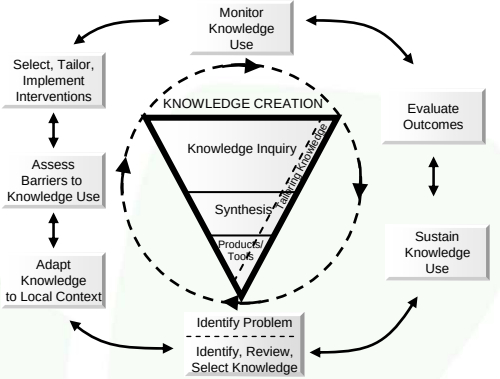

4. Selecting, Tailoring, Implementing Interventions

- Knowledge translation interventions can target different stakeholders:
  - Health Care Professionals: e.g. interventions that bring information close to the point of decision making (such as reminders and decision support)
  - Patients: e.g. interventions that target health literacy or self-care
  - Organizations: e.g. interventions such as quality management, organizational evidence-based practice guidelines

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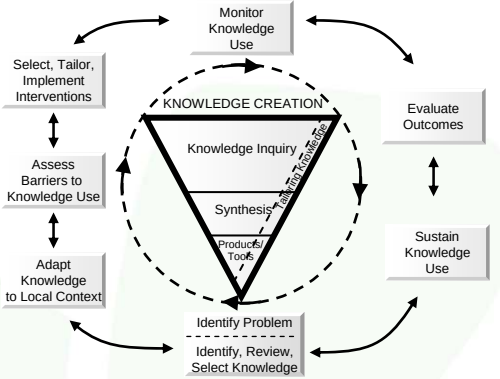

4. Selecting, Tailoring, Implementing Interventions

- KT interventions should be tailored to the barrier to knowledge use on a theory-driven basis.
  - For example,
    - » Barriers for change: difficulty in acquiring the information
    - » Theory: Cognitive theory on learning

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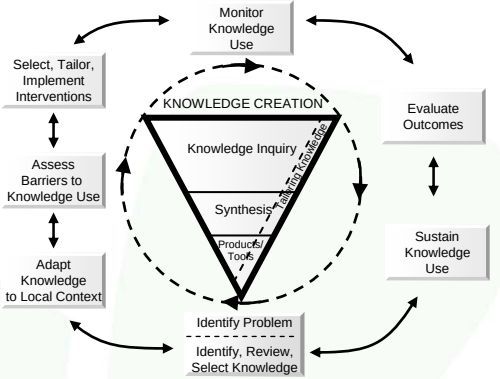

4. Selecting, Tailoring, Implementing Interventions

- Examples:
  - Barrier to knowledge use: Lack of awareness
  - Evidence-based intervention: Printed educational material and reminders are not effective in capturing care-providers' attention in their busy daily routine
    - Interactive educational meetings that invite physicians to actively participate in their learning in an educational setting are effective (Arnold & Straus, 2005)
  - Barrier to knowledge use: Prescribing habit
  - Evidence-based intervention: Make small changes, DELAY, not abolish antibiotic prescriptions (Arnold & Straus, 2005)

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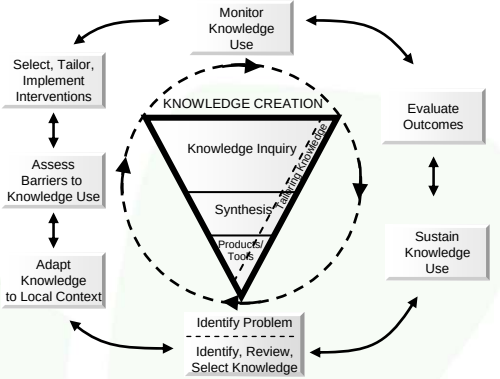

5. Monitoring Knowledge Use

- Knowledge use can be:
  - Conceptual: to change the levels of knowledge, understanding and attitudes
  - Instrumental: to change behavior or practice
  - Persuasive: to use knowledge as ammunition in the attainment of power or profit

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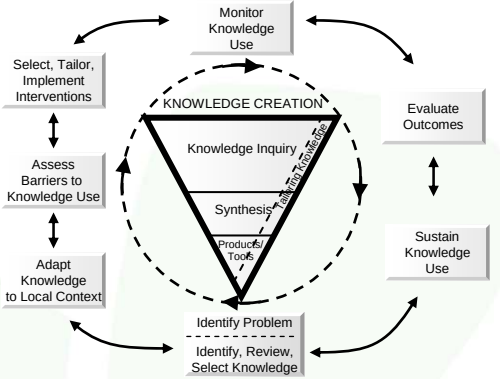

5. Monitoring Knowledge Use (con't)

- Knowledge can be translated in a usable form, such as care pathway, and used in making specific decisions
- Knowledge use could be monitored by observing the frequency of how often such a decision is made
- Example
  - Changes in antibiotic prescription practices could be monitored through electronic/sticker tracking

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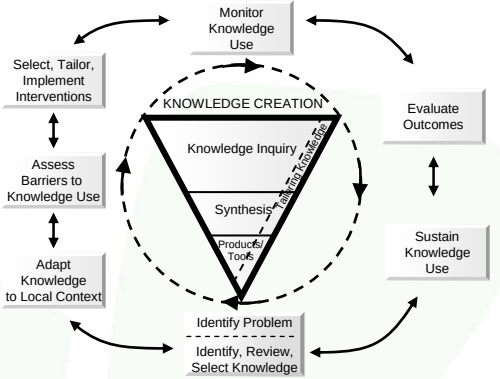

6. Evaluating Outcomes

- Strategies for evaluating knowledge implementation should use explicit, rigorous methods and should consider both qualitative and quantitative methodologies:
  - Examples of qualitative evaluation methodology:
    - » interviews, surveys, focus groups
  - Examples of quantitative evaluation methodology:
    - » Randomised trials, interrupted time series

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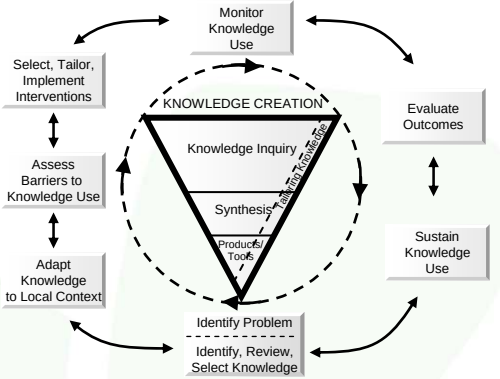

6. Evaluating Outcomes (con't)

- Because the evaluation of outcome is a lengthy and resource-consuming task, attention is also paid to the resource under which knowledge is being implemented and the activities that bring about knowledge use
- Examples:
  - Structural measures: Resource available for interactive educational meeting on optimal practice of prescription
  - Process measures: Antibiotic prescription
  - Outcome measures: Complications, reduced antibiotic-resistant pathogen in local testing hospital

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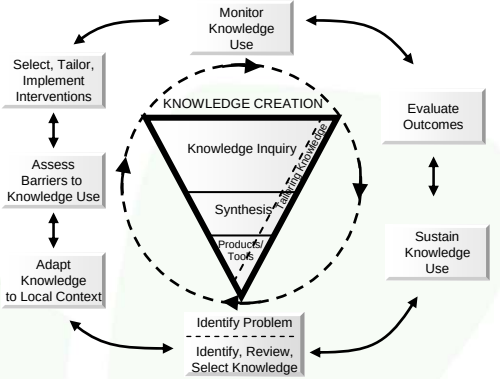

7. Sustaining Knowledge Use

- The sustenance of knowledge use refers to the continued implementation of evidence over time
- The consideration of sustainability should occur early in the process and include the discussion of:
  - Budgetary Resources
  - Human Resources
  - Health Care System

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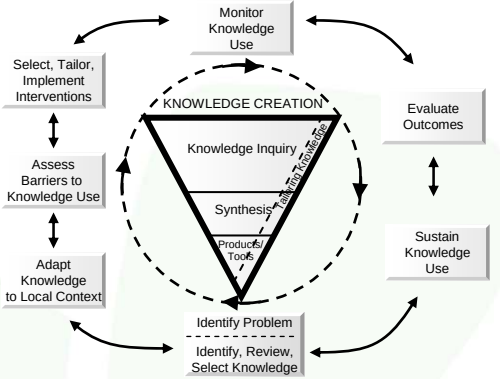

7. Sustaining Knowledge Use (con't)

- Example:
  - To develop a sustainability action plan for changing the prescription practices of antibiotics, needs to consider the following:
    - » How relevant is the issue of antibiotic over-prescription?
    - » What is the benefit of implementing strategies that change practice in antibiotic prescription?
    - » What are the attitudes of physicians, patients and other relevant stakeholders toward the issue of antibiotic over-prescription?
    - » What is the nature of the team/group which can be engaged to facilitate the sustainability of strategies that may lead to optimal prescription practices?
    - » Are there champions of change among the senior management?
    - » How will the new prescription practice fit with the existing policy?
    - » What funding is required, and can cost-effective strategy be used?