



The Terry Fox Research Institute
L'Institut de recherche Terry Fox

Understanding the Adoption of Fluorescence Visualization by Head and Neck Surgeons: Preparation for Knowledge Translation in the COOLS Trial

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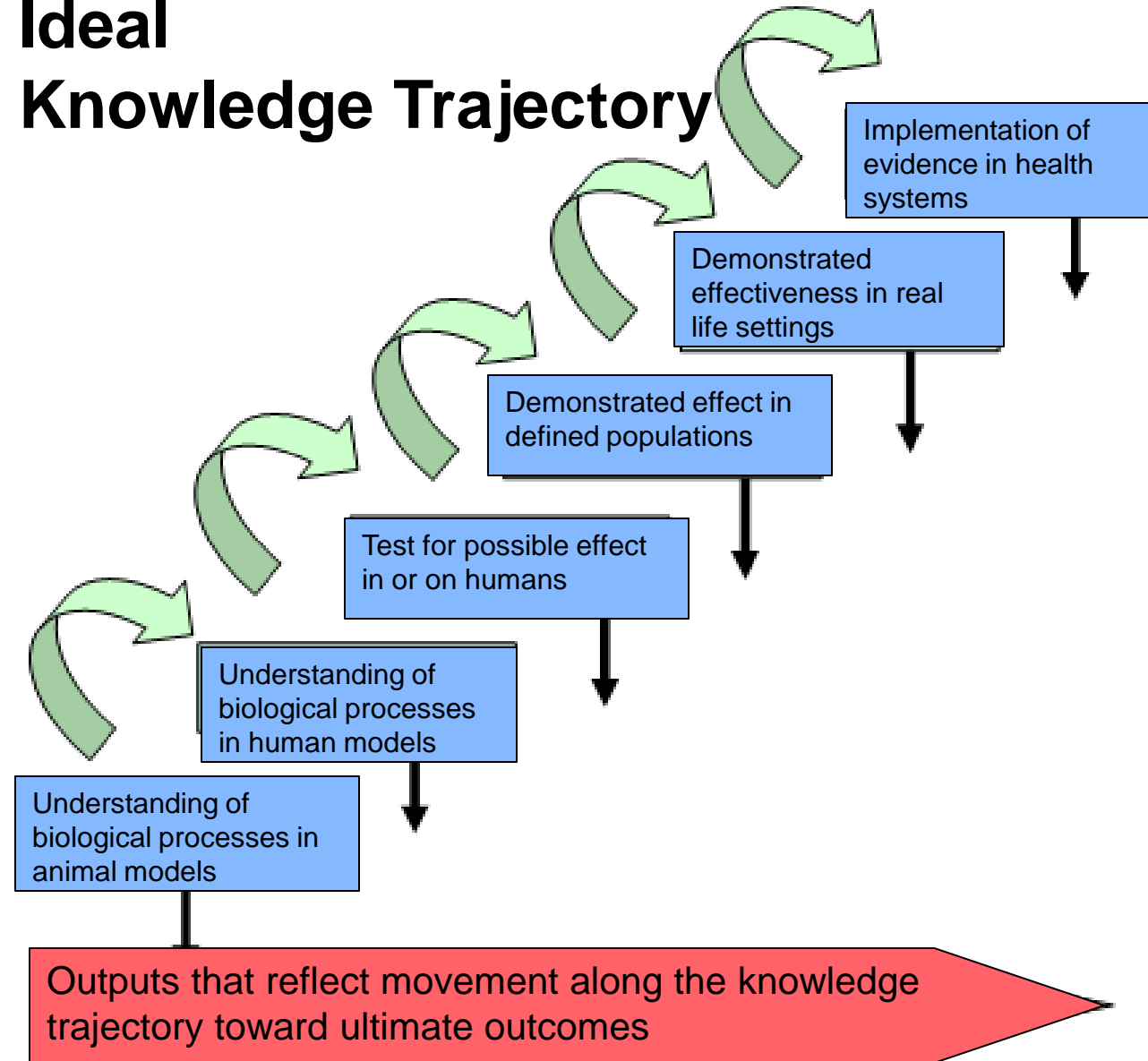
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Outline

- Background
 - What is KT?
 - Problem of Oral Cancer; Promise of FV?
 - COOLS Trial Overview
- Objective
- Methods
- Early Findings
- Next Steps
- Questions?

Ideal Knowledge Trajectory



Ultimate Outcomes

- Accelerated knowledge development
- Health impacts
- Informed decision-making
- Economic impacts

The Know-Do Gap

‘All breakthrough, no follow through’ (Woolf, 2006, Washington Post OpEd)

US\$100B/year
worldwide
investment in
biomedical and
health research



Average **17** years
to get research
put into practice

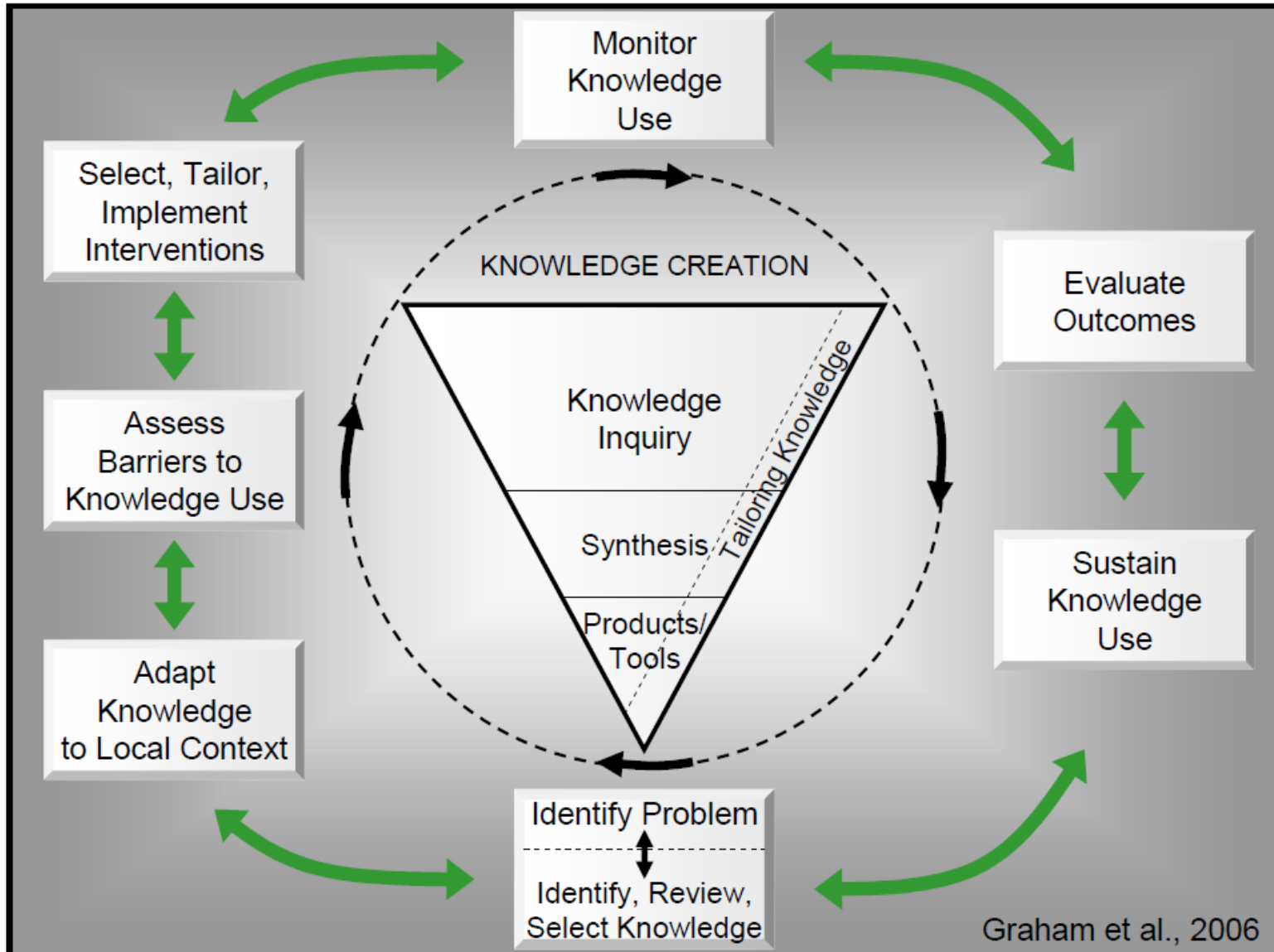
Knowledge Translation (KT)

*“ a dynamic and iterative process that includes the **synthesis, dissemination, exchange & ethically-sound application** of knowledge ... ”*

(CIHR)

KT is about making a difference and moving knowledge into action

Knowledge to Action



Graham et al., 2006

Graham ID et al. (2006). Lost in Knowledge Translation: Time for a Map? *Journal of Continuing Education in the Health Professions*.

Problem of Oral Cancer; Promise of FV?

- Major global health problem
 - 5-year survival = 30-60%
 - **High rate of tumor recurrence (10-30%)**
 - Diseased tissue often extends beyond clinically visible tumor margins
- New handheld light device, fluorescence visualization (FV) technology
 - Preliminary data: reduces recurrence ~10fold



COOLS

- **C**anadian **O**ptically-guided approach for **O**ral **L**esions **S**urgical (COOLS) Trial
- 5 year, national multi-centre (9 sites) Phase III randomized controlled trial
- **Goal:** To determine the efficacy of using fluorescence visualization (FV)-guided surgery to reduce local recurrence of oral cancer
 1. Clinical
 2. Scientific
 3. Health Economics
 4. Knowledge Translation

KT Question

If COOLS findings support the use of FV:

*What should be offered to potential new adopters of FV technology, and in what ways, in order to **maximize its acceptability and successful, timely, ethical, affordable, and efficient application in new, diverse surgical settings?***

Approach to KT in COOLS

Social Marketing methodology

- Collect evidence throughout COOLS Trial



Do formative research to develop and tailor KT package



Partner with potential end-users to get necessary input



Be ready to foster the dissemination of FV-guided surgery in Canada and abroad, *if warranted*

Study Design

Participatory Mixed Methods

- Interviews
- Rapid Appraisal Techniques

**Clinic
Environment
Observation**

**Study Site Data
Collection**

- Pathologist(s)
- Surgeon(s)
- Clinic staff

**KT Package
Development &
Testing**

**Communication
Plan
Development
for new sites**

DISCOVERY PHASE



APPLICATION PHASE

Data Collection & Analysis

- **Participatory mixed methods**
 - Periodic semi-structured interviews
 - Rapid appraisal techniques
(brief surveys, focus groups)
- Thematic coding for domains of interest
- Development of rough **qualitative index**
(relative success of FV implementation: L,M,H)
- Between-case compare and contrast strategy

Domains of Interest

- Factors affecting FV introduction, adoption and maintenance:

- **Technology cluster** (interrelated technologies and practices)
- **Social arrangements, practice patterns, workflow** and associated systems

Advantages

**Dis-
advantages**

Barriers

Facilitators

**Social
Norms**

KT Workplan Progress – M15

Site Location	Pre	Post			
	Y1	Y2	Y3	Y4	Y5
Calgary	√				
Edmonton	√ SV				
Halifax	√				
London	√ SV				
Montreal	√ SV				
Ottawa					
Toronto	√				
Vancouver					
Winnipeg					

FV Adoption

Early Findings

- Training Methods
- Primary outcomes of interest for deciding to maintain the FV innovation
- Unanticipated suggestions



“For you to be convinced, I will be convinced”
“If FV significantly reduces recurrence, I will be convinced”
designing manlier glasses”

Next steps

Site Location	Pre	Post				
	Y1	Y2	Y3	Y4	Y5	
Calgary	√					
Edmonton	√ SV					
Halifax	√					
London	√ SV					
Montreal	√ SV					
Ottawa						
Toronto	√					
Vancouver						
Winnipeg						

FV Adoption

**Continued
Data Collection**

**Training
Package
Refinement**

DISCOVERY PHASE

APPLICATION PHASE

Recognition



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Questions?