Medicine
UNIVERSITY OF TORONTO

Evaluation of KT Interventions

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St. Michael's
Inspired Care
Inspiring Science

Measuring impact of knowledge use

- Type of knowledge use:
  - Instrumental/concrete
    - e.g. prescribing of warfarin in patients with atrial fibrillation
  - Conceptual
    - e.g. provider attitudes about evidence
  - Symbolic
    - e.g. given your knowledge of the evidence around inappropriate use of restraints on older medical inpatients, you convince the nurse manager to develop a ward-based protocol on restraint use

Outcome measures: PCP Level

Outcome	Method	Follow-up	Level at which data collected
X-ray referral	Data abstraction	3 months	Patient
Advice to stay active	Telephone interview	7 days after consultation	Patient
Advised bed rest	Telephone interview	7 days after consultation	Patient
Any imaging referral	Data abstraction	3 months	patient
FAB-Q	Questionnaire	Baseline, 12 months	PCP
Measurement of behavioural constructs	Questionnaire	Baseline, 12 months	PCP

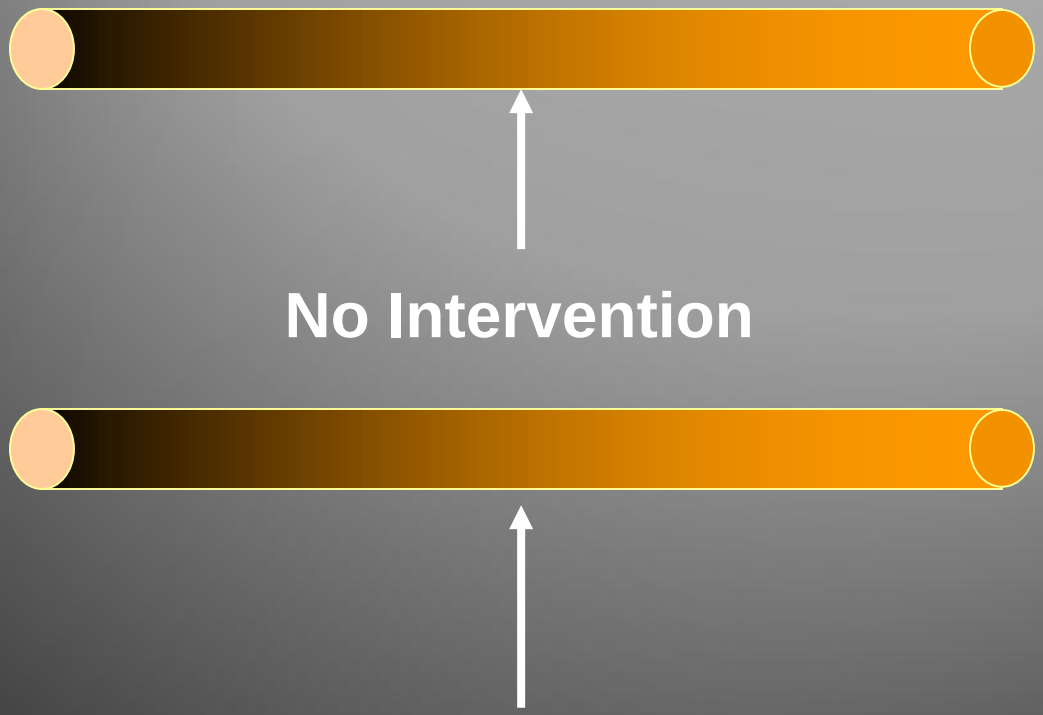
Outcome Measures: Patient Level

Outcome	Method	Follow-up	Level at which data collected
Disability Q	Telephone interview	7 days and 3 months	Patient
Usual pain	Telephone interview	7 days, 3 months	Patient
X-ray occurred	Telephone interview	3 months	Patient
FAB-Q	Telephone interview	7 days and 3 months	Patient
QoL	Telephone interview	7 days and 3 months	Patient
Health Service Utilisation	Telephone interview	7 days and 3 months	Patient

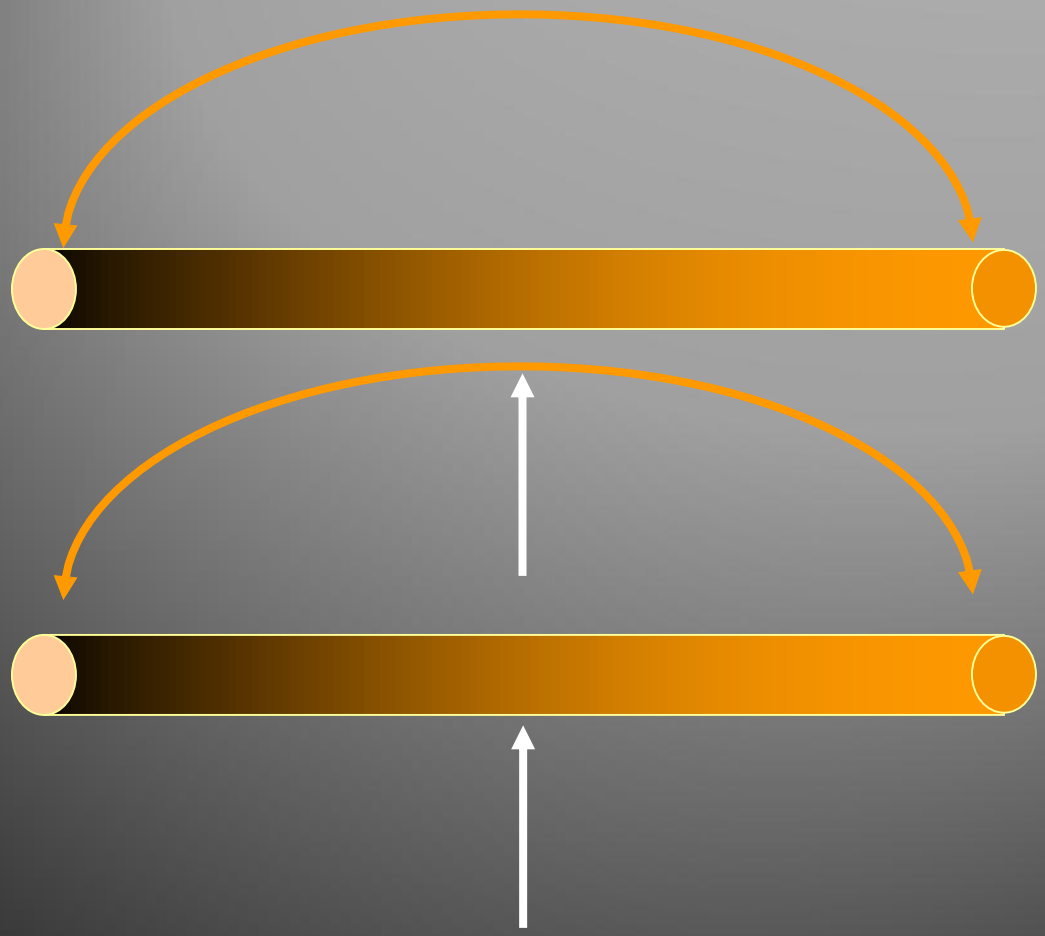
Evaluating the impact of knowledge use

- RCT
- ITS
- Controlled before and after study
- Qualitative study
  - Investigate the active ingredients

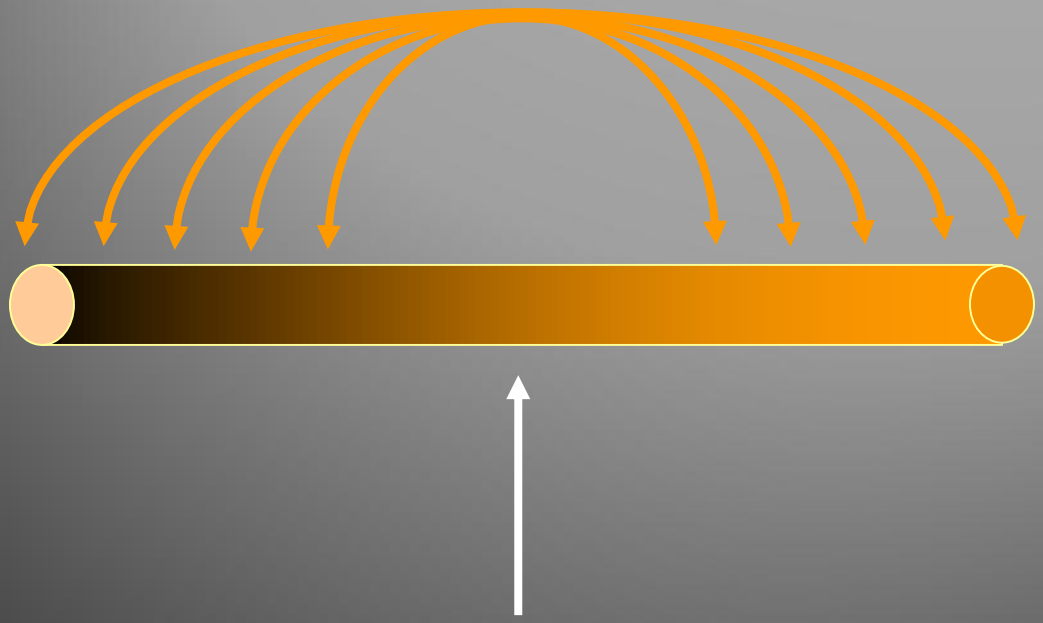
Controlled Before/After Design



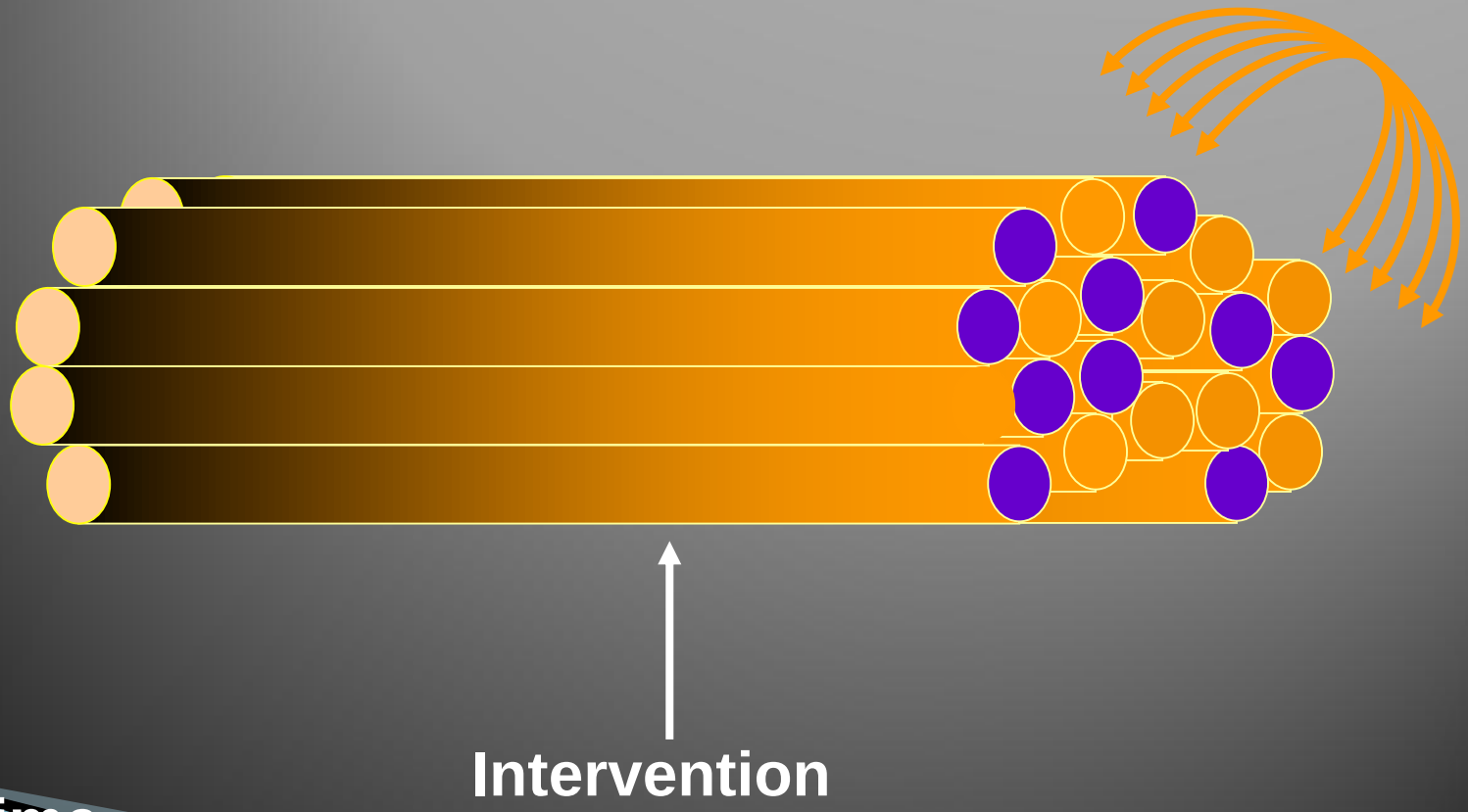
Controlled Before/After Design



Interrupted Time Series



Randomised Controlled Trial



- A remedy which is known to work, though nobody knows why, is preferable to a remedy which has the support of theory without the confirmation of practice….
- The question to which we must always find the answer is not “should it work” but “does it work”
- R. Asher, Lancet 1961

Sustaining knowledge use

- Post-implementation surveillance of the intervention, outcomes and the health care system
- May require modification of the intervention
  - And assessment of barriers/facilitators
- Requires ongoing engagement with relevant end-users

Assessing Sustainability

- Consider:
  - Who are the stakeholders
  - What are the threats to sustainability:
    - Human resources
    - Process
    - Organisational
  - How can we engage all the relevant stakeholders to facilitate sustainability

Resources

- KT Seminar Series
- KT Basics Course and End of Grant KT Course
- http://ktclearinghouse.ca
- Knowledge Translation in Health Care. Eds Straus, Tetroe, Graham. Wiley 2009
- Evidence-based medicine: How to practice and teach it. 4th Edition. Elsevier, 2010.

FORCE Study

- Local public health agency has been working with the home care agency and a patient advocacy group because they noticed a problem with admissions to hospital in older adults with falls and fractures.
- Existing evidence for management of osteoporosis available
  - Age and Ageing 2009;38:723-30

FORCE Study

- They engaged primary care clinicians, general internists, pharmacists and rehabilitation therapists
- They did a local study showing that less than 40% of these people get assessed for osteoporosis or falls risk
- Identified barriers and facilitators to adaptation of the evidence
  - Lack of primary care clinicians; lack of referral to specialists, lack of knowledge of significance of OP…

FORCE Study

- Randomised trial of a multi-component educational intervention aimed at enhancing implementation of falls and osteoporosis management strategies for high-risk patients
- Randomised 201 patients to immediate intervention or delayed intervention
- Patients in the delayed intervention group were offered the intervention at 6 months

FORCE Study

- Patients were eligible for inclusion in the study if they were:
  - community-dwelling,
  - aged 55 years or older,
  - able to give informed consent, and
  - were identified to be at high risk for osteoporosis or falls

Intervention

- Nurse completed the Berg Balance Scale, InterRai Screener, medication review and checked for orthostatic hypotension
- BMD ordered and results sent to PCP with relevant prescribing information based on Osteoporosis Society of Canada guidelines
- Similar information given to patient

Outcomes

- Primary outcome:
  - Appropriate use of osteoporosis
  - Falls risk management at 6 months
- Secondary outcomes:
  - Appropriate use of management at 12 months
  - Falls
  - Fractures

Results

- Appropriate OP therapy
  - 56% of IP group vs. 27% of DP group at 6 months (RR 2.09 [95% CI 1.29 to 3.40])
  - At 12 months, there was no difference between the 2 groups
- Number of falls in IP group was greater at 12 months
  - (RR 2.07 [95% CI 1.07 to 4.02])
- Quality of life enhanced in intervention group

Fracture Prevention – Monika Kastner

- FORCE study identified role for self-management
- We are creating self-management tools for patients with chronic diseases
- BestPrompt
  - Osteoporosis risk management tool for patients and providers

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