Quality improvement vs quality improvement research

Quality Improvement
• Problem solving – improving quality in our setting; contextualised experiential learning
• Normative
• Contextual issues – implicit
• Demonstrating causal relationship between QI activities and improved quality not that important
• Evaluative designs – observational, quasi experimental

Quality improvement research
• Knowledge generation – generating more generalisable knowledge about how to undertake QI better
• Normative, predictive
• Contextual issues – need to be explored explicitly
• Demonstrating and understanding causal relationship between QI activities and improved quality central
• Evaluative designs – randomised controlled trials, quasi experimental
Assess barriers & supports + Monitor strategy application & degree of use + Evaluate outcomes

Practice Environment
- structural
- social
- patients
- economic

Potential Adopters
- attitudes
- knowledge
- skill

Evidence - Based Recommendations
- development process
- innovation attributes

Strategies
- barrier management
- transfer
- uptake

Adoption
- intention
- use

Outcomes
- patient
- practitioner
- system

Logan & Graham, 2002
Levels of intervention to improve quality of care

- Ferlie and Shortell suggest four levels of interventions to improve the quality of health care:
  - the individual health professional;
  - health care groups or teams;
  - organisations providing health care;
  - the larger health care system or environment in which individual organizations are embedded.

- Different interventions at different levels targeting different stakeholders likely to be needed depending on identified barriers

Ferlie, Shortell (2001). *Milbank Quarterly*
Quality improvement research

This is the scientific study of the determinants, processes and outcomes of QI including:

• knowledge synthesis (to identify the evidence base for QI);
• identification of knowledge to action gaps;
• development of methods to assess barriers and facilitators to QI;
• development of the methods for optimizing QI strategies;
• evaluations of the effectiveness and efficiency of QI strategies;
• development of QI theory; and
• development of QI research methods.
Quality improvement methods

- Diverse methods required depending on research question
- Eg for what works questions, Rigorous evaluations (mainly randomised controlled trials) provide the best evidence of effectiveness of different interventions because:
  - Effects of interventions need to be tested across settings
  - Effects of interventions are modest
  - Limited understanding of likely confounders
  - Substantial opportunity costs if ineffective or inefficient dissemination and implementation strategies used
Personal research (1)

- Systematic reviews of interventions to improve healthcare systems and delivery
  - Co-ordinating Editor of Cochrane Effective Practice and Organisation of Care (EPOC) group
  - Supported 39 completed and 39 ongoing reviews
  - Undertaken two overview of reviews

- Large scale rigorous evaluations of dissemination and implementation strategies
  - Involved in over 30 cluster randomised trials and two quasi experimental studies
Personal research (2)

- Methodological and theoretical developments
  - Methods of developing clinical practice guidelines
  - Methods of appraising clinical practice guidelines
  - Methods of cluster randomised trials in implementation research
  - Assessing the applicability of behavioural theory to health care professional behaviour
- Epidemiology of health knowledge
Key findings

• Possible to change provider behaviour and improve quality
• Modest but potentially important effects (eg audit and feedback leads to median 10% absolute improvement)
• Substantial variability of effects within intervention classes (eg audit and feedback - 2% to +71%)
• Low intensity interventions sometime very effective
Key findings

- Current research often suffers from technical weaknesses that are easily addressed
- Need better understanding of mechanisms of action of different interventions and potential effect modifiers
- Behavioural theories appear to apply to professional behaviours
- Behavioural theories identify potential targets and mechanisms for interventions
- Need to consider economic issues
Summary

- QI research is the scientific study of the determinants, processes and outcomes of QI
- Diverse questions that require diverse (and interdisciplinary) research approaches but do not warrant different research approaches
- Emergent empirical and theoretical evidence base that can guide QI activities
- Further research needed to:
  - Develop methods of barrier identification
  - Optimise interventions
  - Evaluate effectiveness and efficiency of QI strategies