Barriers and facilitators of implementing complex interventions in primary care

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Background

• Two translational gaps have been identified (Cooksey report, 2006):

  - 1st translational gap
    Basic laboratory research → diagnostic procedures / treatment of illnesses / diseases

  - 2nd translational gap
    Development / implementation of new interventions / processes → every day clinical practice
What is the problem?

• Takes ~17 years to turn 14% of original research findings into changes in care that benefited patients (*Balas et al.*, 2000).

• At least 30-40% of patients do not receive care according to current scientific evidence; 20% or more of the care provided is not needed or potentially harmful to patients (*Grol*, 2003).
Why does this matter?

- Patients receive sub-optimal care
- Health care costs are rising due to:
  - Ageing population; in long term conditions
  - Medical advances; Rising consumer expectations
- Budget not rising, so
- Every health care £ must be “well spent”
  - Effective, cost-effective, avoid opportunity cost
Why focus on primary care?

- Enormous structural re-organisations
- 2/3 of NHS England budget controlled by CCGs
- 90% of health care episodes dealt with in primary care
- Primary care / general practice has a unique culture / relation with research
Aim

To identify, summarise and synthesise the available literature on the second translational gap
Methods: Systematic review of reviews

Systematic methods of:

• Searching – to identify all relevant papers
• Explicit criteria for inclusion / exclusion
• Data extraction
• Data synthesis

Enables identification, description and synthesis of large literature (relatively) quickly.
Inclusion criteria and Definitions.

Reviews of causes of or methods of closing the 2\textsuperscript{nd} translational gap for complex interventions in primary care

Review: a summary of studies addressing a clearly formulated question that uses explicit methods to identify, select & analyse data from included studies.
Definitions (cont)

**Implementation:** involves all activities that occur between making an adoption commitment and the time that an innovation either becomes part of routine practice, ceases to be new, or is abandoned.

**Complex intervention:** multiple interacting components; may act independently or interdependently. (MRC)

**Primary care:** “... the first level contact with people taking action to improve health in a community.” (RCGP)
Methods

Identification:

Comprehensive search of 5 databases

(Medline, Embase, Cochrane Lib, CINAHL, PsycINFO)

Study Selection:

Double screening of abstracts and full papers

Data extraction:

Standardised data extraction forms;
25% of data from included reviews double checked

Data synthesis:

Review 1: Causes = meta-synthesis / qualitative
Review 2: Methods of closing = quantitative
Sub-review (1)
Causes

Evidence-practice gap

Sub-review (2)
Effective implementation methods/strategies

Synthesis 1

Synthesis 2
Meta-synthesis

• “It is not an integrated or narrative review, nor a secondary analysis of the primary raw data; rather it is the reviewers’ interpretation of the findings, which may include themes, categories and relationships, arising from the data of the original findings, to produce new interpretations that incorporate the meanings of the included studies” (Jensen & Allen, 2006).

• Also known as meta-study, meta-ethnography, qualitative meta-analysis, aggregated analysis.
Meta-synthesis – how?

Step 1: framing a research question
Step 2: locating relevant papers
Step 3: deciding what to include
Step 4: appraisal of studies
Step 5: analytic technique
  – 5a: determine how the studies are related – common and recurring concepts
  – 5b: translate the studies into one another
Step 6: synthesis of translation - establish relationships between the studies (reciprocal vs. refutational)

(Walsh, 2005)
Synthesis

Extract list of barriers and facilitators

Read and re-read the papers

Develop initial coding framework (pilot of 10 papers) + descriptors

Continue to map B&F onto the framework
  - Modifying themes/sub-themes
  - Re-configuring data

Final coding framework
Results
5735 potentially relevant records identified through electronic bibliographic databases

4576 records after de-duplication

592 full-text potentially eligible articles retrieved and assessed for eligibility against inclusion/exclusion criteria

161 articles included in the review of reviews

3984 excluded on the basis of title and abstract

431 full-text articles excluded:
Not primary care setting/insufficiently focused on primary care, n=19
Not complex intervention, n=8
Not about implementation, n=216
Intervention not targeted at professionals, n=15
Not a review (no methods), n=148
Review of reviews, n=13
Published in foreign language, n=12

Causes
61 publications

Effective methods/implementation strategies
100 publications
Characteristics of included reviews

• Overwhelmingly referred to “barriers and facilitators”
  – “Barriers” (n = 58); “Facilitators” (n = 39); Both (n = 36).

• 56% (n=28) primary care only; rest = mixed settings

• Review origin:
  – 50% (n = 30) USA / Canada
  – 25% (n = 15) UK
  – 25% (n = 16) Europe / rest of world
Characteristics of included reviews

Wide range of topics addressed:

– Guideline implementation (n = 13)
– Disease management (n = 9)
– Technology implementation (n = 21)
– Public health and preventative medicine (n = 10)
– Role integration / change (n = 6)
– Prescribing (n = 1)

23 Mentioned theory (analysis or discussion)
22 Critically appraised included studies
4 Domains

- **Context**: 8 themes
- **Organisation**: 6 themes
- **Professionals**: 4 themes
- **Intervention**: 3 themes
Context

- Policy & legislation
- Infrastructure
- Economics & financing
- Incentives
- Dominant paradigms
- Public awareness
- Stakeholder buy in
- Technological advances

Presence of stated goals / objectives
Regulatory frameworks
Codes of practice
Local and national agendas

Evidence-based medicine, NICE
Patient-centred care
Organisation

- Culture & leadership
  - Between professionals
  - Between patients and professionals

- Processes & systems
  - Clarity about roles & responsibilities
  - Skill mix and division of labour

- Relationships

- Resources

- Skill mix

- Involvement
  - Shared vision
  - Collaborative working
  - Supportive team and management
Professionals

- Professional role
  - Authority / influence
  - Peer influences
  - Professionalism
  - Self-efficacy

- Underlying philosophy of care

- Attitudes to change
  - Motivation and priority
  - Prior experience
  - Workload / competing demands
  - Perception of time

- Competencies
Intervention

- Nature & characteristics
- Implementability & adaptability
- Safety & data privacy

Clarity
Complexity
Evidence of benefit
Applicability & relevance
Costs
Cost-effectiveness

Practicality & utility
Complexity of implementation
Training requirement
Benefit / harm of implementation
Adaptability
IT compatibility
Resource requirements
Implications for practice

1. Implementation is complex – and the 2\textsuperscript{nd} translational gap is not surprising

2. Context, organisation, professionals and the intervention interact with and impact on each other – no good thinking of one in isolation

3. Understanding and defining context is key, as is the “fit” between intervention and context

4. Organisational features may explain variations between practices

5. Don’t blame individual professionals
Implications for research

NOT NEEDED

• Descriptive research on barriers and facilitators.

NEEDED

Theoretically – driven research on:

• Understanding, defining and describing context
• Is the “fit” between context and intervention key?
• Understanding the relative contribution & importance of identified factors
• With a view to designing better implementation strategies
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