Effectiveness of Strategies for Changing Professional Practice in Primary Care: A Systematic Review of Reviews

Rosa Lau, UCL
Barriers

- External context
- Organisation
- Professional
- Intervention

Strategies?

Effective implementation
Implementation strategies

- Aimed at optimising uptake of complex interventions, by overcoming barriers identified by implementers, to ensure fidelity.
EPOC taxonomy

• Cochrane Effective Practice and Organisation of Care Group

• EPOC Interventions – improve the delivery, practice and organisation of health care services (http://epoc.cochrane.org.epoc-author-resources)
EPOC taxonomy

Professional
- Distribution of educational materials
- Educational meetings
- Educational outreach visits
- Audit & feedback, local opinion leaders

Organisational
- Revision of roles
- Multi-disciplinary teams
- Skill mix changes
- Continuity of care

Financial
- Fee-for-service
- Capitation
- Provider/ institution incentives

Regulatory
- Change health services by law
- Changes in medical liability
Aim/Objectives

1. Overall effectiveness of implementation strategies
   - Single
   - Multifaceted

2. Effectiveness according to type of targeted behaviour

3. Features associated with effectiveness

4. Cost-effectiveness
<table>
<thead>
<tr>
<th><strong>Population</strong></th>
<th><strong>Intervention</strong></th>
<th><strong>Outcomes</strong></th>
<th><strong>Study type(s)</strong></th>
</tr>
</thead>
</table>
| Primary care in developed countries | Single/multifaceted strategies for implementing complex interventions | Degree of implementation, | • Systematic reviews  
| | Comparator | • Measures of process of care (e.g. referral rates)  
| | • Control or no strategy  
| | | • Professionals’ behaviour or performance (e.g. adherence to guidelines)  
| | • Another strategy (single/multifaceted) | | • Meta-analyses  
| | | | • Literature review  
| | | | • Transparent methods (e.g. identification, inclusion/exclusion) |
Methods

Identification
Comprehensive search x 5 databases (Medline, Embase, Cochrane Lib, CINAHL, PsycINFO)

Study selection
Double-screening 1) titles/abstracts; 2) full text articles

Data Extraction
Standardised forms (characteristics of reviews, results for different comparisons, cost-effectiveness)

Analysis
Narrative synthesis
Methods

1. Categorize papers into different EPOC taxonomy and sort chronologically
2. Selection of benchmark paper for each strategy, based on:
   - Rigor of reviewing methodology
   - Comprehensiveness
   - Year of publication
3. Selection of outcomes
   Expert panel members chose ≤3 important outcomes for each strategy
4. Full data extraction of each benchmark paper
5. Insert results into various synthesis tables
6. Enter each subsequent paper into the synthesis
7. Incorporate other relevant data into the synthesis
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

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

161 articles included in the review of reviews

Barriers/facilitators
61 publications

Effective methods/implementation strategies
100 publications
Aim/Objectives

1. Effectiveness of implementation strategies
   - Single
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Context-level strategies: Financial interventions

- Benchmark review (Scott et al. 2011): overall effect size not calculated

- Heterogeneity: type of payments/programmes, outcome measures

- +ve but variable effects on a small number of quality measures (n primary studies=7)

- Other relevant reviews (n reviews =9)

- Potential unintended consequences – limited evidence
## Organisational-level strategies

- **Examples of effective organisational interventions:**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative care for patients with anxiety/depression</td>
<td>↑ treatment adherence</td>
</tr>
<tr>
<td>Telephone medication counselling delivered by non-physicians in depression care</td>
<td>↑ depression outcomes, access</td>
</tr>
<tr>
<td>Nurse driven protocol for screening</td>
<td>↑ documentation of follow up plan</td>
</tr>
<tr>
<td>Practice facilitators</td>
<td>↑ relationships/comm, ↑ screening rates, facilitated CQI techniques</td>
</tr>
</tbody>
</table>

- **Collaborative care more readily adopted – good relationships between primary and secondary care (How?)**
Absence of evidence??

Organisational-level strategies

- Strategies that change organisational culture
- Strategies that improve communication/relationships (regular meetings, team building)
- Strategies that promote leadership (motivate & support)
- Strategies that help reengineer processes
- Strategies that promote good project management
- Measurement of performance (e.g. feedback)
- Different staffing models
- Strategies that promote buy-in & involvement
Individual-level strategies: Professional interventions

Single implementation strategy vs. no strategy on compliance with desired practice – benchmark reviews

Mean/median risk difference and its IQR (percentage)

- Educational outreach
- Audit and feedback
- Educational meetings (CME)
- Reminders (computerised)
- Printed educational materials
- Local opinion leaders

n RCTs = 19
n RCTs = 26
n RCTs = 19
n trials* = 18
n studies* = 7
n RCTs = 5
Aim/Objectives

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Multifaceted interventions

- Mixed results

- Singles strategies could be as effective as multifaceted strategies:
  - Multifaceted strategies including educational meetings showed similar effectiveness when compared to educational meetings alone (median adjusted RD 6.0 for both groups, p=0.90)

- ↑ no. of strategies ≠ ↑ effect size, reasons:
  - Ceiling effect
  - Relevance
  - Did not include features associated with effectiveness
Aim/Objectives

1. Effectiveness of implementation strategies
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3. Features associated with effectiveness

4. Cost-effectiveness
## Effectiveness, by type of behaviour

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>A&amp;F</th>
<th>Educational meetings</th>
<th>Outreach visits</th>
<th>Reminders</th>
<th>Printed educational materials</th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideline</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>x</td>
<td>No data</td>
</tr>
<tr>
<td>Disease management</td>
<td>+</td>
<td>x</td>
<td>+</td>
<td>+</td>
<td>No data</td>
<td>Variable</td>
</tr>
<tr>
<td>Screening</td>
<td>No data</td>
<td>++</td>
<td>No data</td>
<td>Variable</td>
<td>No data</td>
<td>+</td>
</tr>
<tr>
<td>Preventive behaviour</td>
<td>No data</td>
<td>Variable</td>
<td>Variable</td>
<td>+</td>
<td>No data</td>
<td>++</td>
</tr>
<tr>
<td>Prescribing behaviour</td>
<td>+</td>
<td>No data</td>
<td>++</td>
<td>+</td>
<td>x</td>
<td>No data</td>
</tr>
</tbody>
</table>

++, effective (more reviews, consistent finding)  
+, effective (fewer reviews, less consistent finding)  
x, minimal effect or not effective  
Variable, variable and inconsistent effects across reviews
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Features associated with effectiveness

• Features that enhance effectiveness/implementation (active features)

• Why are they important?
Audit & feedback: active features

- Low baseline
- Personal relevance/tailoring
- Mixed interactive + didactic
- Measurable targets/action plan
- Source: superior
- Close to decision making
- Concurrent
Educational interventions: active features

- Low complexity
- Educationally influential
- Mixed interactive + didactic
- Small team/facilitated session
- Led by superior
- Identify needs with facilitator
- Clear goals
- Tailoring
Educational interventions: inactive features

- High complexity
- Didactic
- Passive
- Minimal interaction
Financial interventions: active features

- Low complexity
- Low baseline
- Nation-level program
- High awareness
- Clear goal
- Rewards only
- Concurrent payment
- Stakeholder involvement in incentive programme development
- National-level program
Financial interventions: inactive features

- High complexity
- Small rewards
- Low awareness
- End of year payment

? Payment distribution/use ?
? Sustainability ?
Aim/Objectives

1. Effectiveness of implementation strategies
   ▪ Single
   ▪ Multifaceted
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4. Cost-effectiveness
Cost-effectiveness

- Limited evidence
- Limited generalisability
- Guideline implementation strategies HTA (Grimshaw et al, 2004) – 29% studies reported cost analyses/ economic evaluations
- Some strategies → more resource intensive
Summary (1)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Effects on practice/performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>External context level</td>
<td></td>
</tr>
<tr>
<td>Financial interventions</td>
<td>Variable</td>
</tr>
<tr>
<td>Organisational level</td>
<td>?</td>
</tr>
<tr>
<td>Individual level</td>
<td></td>
</tr>
<tr>
<td>Professional interventions</td>
<td>Median improvement 2-9% A&amp;F and Outreach visits – best evidence base</td>
</tr>
<tr>
<td>Intervention level</td>
<td>?</td>
</tr>
</tbody>
</table>

- Most research on strategies directed at individual level
- Little research on external context/organisational level strategies
Summary (2)

- No “one size fits all” implementation strategy - context
- Multifaceted vs. single strategies: more is not always better.
- Incorporate active features, where possible
- Long term effects (sustainability)
Future research

• We do not require more research on audit and feedback and educational outreach visits.

• Further studies on:
  ➢ Strategies at the level of external context/organisations
    • What are they?
    • Clinical- and cost-effectiveness
    • How do they work?

  ➢ Which combinations of strategies are more likely to work?
1. Consider context before choosing implementation strategies - use of toolkit?

2. Multifaceted strategies may not be more effective than single strategies alone

3. “Fit” between intervention and context is vital
Acknowledgement

Prof Elizabeth Murray (UCL)
Prof Pauline Ong (Keele University)

Steering committee members:
Dr Fiona Stevenson (UCL)
Prof Krysia Dziedzic (Keele University)
Prof Sandra Eldridge (Barts and The London, QMUL)
Dr Hazel Everitt (Southampton University)
Dr Anne Kennedy (Southampton University)
Dr Evangelos Kontepanelis (Manchester University)
Prof Paul Little (Southampton University)
Prof Nadeem Qureshi (University of Nottingham)
Prof Anne Rogers (Southampton University)
Prof Shaun Treweek (University of Aberdeen)

Funder: National School of Primary Care Research

Disclaimer: This presentation presents independent research funded by the National Institute for Health Research School of Primary Care Research (NIHR NSPCR) (Grant Reference Number NSPCR FR4 Project 122). The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health.