A research translation intervention to increase uptake of dementia guidelines in general practice

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Parallel 3B: Chronic illness
Background

- Dementia is a growing problem worldwide
  - 35.6 million worldwide\(^1\) and 298,000 in Australia\(^2\) in 2010
  - projected to increase to 115 million worldwide\(^1\) and 900,000 in Australia\(^2\) by 2050

- Substantial health, social and financial consequences

- GPs have key role in detecting and managing dementia

1. Prince et al. *NEJM* 2013; 2. AIHW. *Dementia in Australia* 2012
Caring for Patients with Dementia: How Good Is the Quality of Care? Results from Three Health Systems

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OBJECTIVES: To describe the quality of dementia care across all four dimensions of care and to investigate associations between variations in quality and patient, caregiver, and health system characteristics.

DESIGN: Observational, cross-sectional;

SETTING AND PARTICIPANTS: Three hundred eighty-seven patient-caregiver pairs from three health care organizations;

MEASUREMENTS: Using caregiver surveys and medical record abstraction to assess 18 dementia care processes drawn from existing guidelines, the proportion adherent to each care process was calculated, as well as mean percentages of adherence aggregated within four care dimension assessments (6 processes), treatment (6 processes), education and support (3 processes), and safety (3 processes). For each dimension, associations between adherence and patient, caregiver, and health system characteristics were investigated using multivariable models.

RESULTS: Adherence ranged from 9% to 79% for the 18 individual care processes; 11 processes had less than 40% adherence. Mean percentage adherence across the four care dimensions was 37% for assessment, 33% for treatment, 52% for education and support, and 21% for safety.

Higher comorbidity was an associated with lower adherence in the following domains: incontinence, communication, and pain. These findings offer opportunities for improvement and suggest potential focus for care planning. At baseline, key words: dementia; care; caregiver.

Dementia: opportunities for risk reduction and early detection in general practice

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Abstract. This project aimed to measure general practitioner (GP), practice nurse and patient health literacy about dementia risk factors. Data were collected from general practices across Australia and a smaller sample in England. Questionnaires explored sources and adequacy of dementia knowledge and a randomised controlled trial tested the intervention of a dementia risk reduction manual on patient knowledge of dementia risk reduction strategies.

In the United States, an estimated 5.2 million people have Alzheimer's disease, and 15.4 million people have another form of dementia. The majority of people with dementia live at home, and they and their caregivers face significant challenges. The goal of this project was to assess the adequacy of knowledge about dementia risk factors and to test an intervention to improve knowledge.

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Evidence-based care of older people with suspected cognitive impairment in general practice: protocol for the IRIS cluster randomised trial

Joanne E McKenzie1*, Simon D French1,2, Denise A O’Connor1, Duncan S Mortimer3, Colette J Browning4, Grant M Russell4, Jeremy M Grimshaw5, Martin P Eccles6, Jill J Francis7, Susan Michie8, Kerry Murphy1, Fiona Kossenas1, Sally E Green1 and IRIS trial group

Aims: This trial aims to estimate the effectiveness of a theory-informed intervention to increase GPs’ (in Victoria, Australia) adherence to a clinical guideline for the detection, diagnosis, and management of dementia in general practice, compared with providing GPs with a printed copy of the guideline. Primary objectives include testing if the intervention is effective in increasing the percentage of patients with suspected cognitive impairment who receive care consistent with two key guideline recommendations: receipt of a i) formal cognitive assessment, and ii) depression assessment using a validated scale (primary outcomes for the trial).
Why tailored?

## Effects of research translation interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th># studies</th>
<th>Effect size (median absolute improvement in desired practice)</th>
<th>Interquartile range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit and feedback (Ivers 2012)</td>
<td>140 RCTs</td>
<td>+4.3%</td>
<td>+0.5% to +16.0%</td>
</tr>
<tr>
<td>Computer-generated paper reminders (Arditi 2012)</td>
<td>27 RCTs, 5 NRCTs</td>
<td>+11.2%</td>
<td>+6.5% to +19.6%</td>
</tr>
<tr>
<td>Educational meetings (Forsetlund 2009)</td>
<td>81 RCTs</td>
<td>+6.0%</td>
<td>+1.8% to +15.9%</td>
</tr>
<tr>
<td>Educational outreach (O’Brien 2007)</td>
<td>69 RCTs</td>
<td>+5.6%</td>
<td>+3.0% to +9.0%</td>
</tr>
<tr>
<td>Local opinion leaders (Flodgren 2011)</td>
<td>18 RCTs</td>
<td>+12.0%</td>
<td>+6.0% to +14.5%</td>
</tr>
<tr>
<td>On-screen point of care computerised reminders (Shojania 2009)</td>
<td>28 RCTs</td>
<td>+4.2%</td>
<td>+0.8% to +18.8%</td>
</tr>
</tbody>
</table>

Cochrane Effective Practice and Organisation of Care (EPOC) reviews
www.thecochranelibrary.com
Why tailored?

- Interventions tailored to prospectively identified barriers are more likely to improve professional practice than no intervention or non-tailored interventions
Our approach to designing tailored research translation interventions

Developing theory-informed behaviour change interventions to implement evidence into practice: a systematic approach using the Theoretical Domains Framework

**Step 1. Who needs to do what, differently?**

**Step 2. Using a theoretical framework, which barriers and enablers need to be addressed?**

**Step 3. Which intervention components could overcome the modifiable barriers and enhance the enablers, informed by theory, evidence, feasibility/acceptability?**

**Step 4. How can behaviour change be measured and understood?**

**Abstract**

**Background:** There is little systematic operational guidance about how best to develop complex interventions to reduce the gap between practice and evidence. This article is one in a series of articles documenting the development and use of the Theoretical Domains Framework (TDF) to advance the science of implementation research.

**Methods:** The intervention was developed considering three main components: theory, evidence, and practical issues. We used a four-step approach, consisting of guiding questions, to direct the choice of the most appropriate components of an implementation intervention: Who needs to do what, differently? Using a theoretical framework, which barriers and enablers need to be addressed? Which intervention components (behaviour change techniques and models of delivery) could overcome the modifiable barriers and enhance the enablers? And how can behaviour change be measured and understood?

**Results:** A complex implementation intervention was designed that aimed to improve acute low back pain management in primary care. We used the TDF to identify the barriers and enablers to the uptake of evidence into practice and to guide the choice of intervention components. These components were then combined into a cohesive intervention. The intervention was delivered via two facilitated interactive small group workshops. We also produced a DVD to distribute to all participants in the intervention group. We chose outcome measures in order to assess the mediating mechanisms of behaviour change.

**Conclusions:** We have illustrated a four-step systematic method for developing an intervention designed to change clinical practice based on a theoretical framework. The method of development provides a systematic framework that could be used by others developing complex implementation interventions. While this framework should be iteratively adjusted and refined to suit other contexts and settings, we believe that the four-step process should be maintained as the primary framework to guide researchers through a comprehensive intervention development process.
Our approach to designing tailored research translation interventions

1. Who needs to do what, differently?
2. Using a theoretical framework, which barriers and enablers need to be addressed?
3. Which intervention components could overcome the modifiable barriers and enhance the enablers, informed by theory, evidence, feasibility/acceptability?
4. How can behaviour change be measured and understood?

French et al. *Implement Sci* 2012
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Step 4. How can behaviour change be measured and understood?
1. Who needs to do what differently?

- Identified 13 guideline recommendations for detecting, diagnosing and managing dementia relevant to general practice as targets for change.

- Examples:
  - Conduct a formal cognitive assessment using a validated scale (e.g. MMSE) in individuals with suspected cognitive impairment (Grade B recommendation, SIGN guideline 86)
  - Assess for co-morbid depression using a validated tool (e.g. GDS) (Grade B recommendation, SIGN guideline 86)
  - Refer for head/brain CT scan in the diagnostic workup of patients with suspected dementia (Grade C recommendation, SIGN guideline 86)

- Recommendations specified in behavioural terms (*who, what, where, when, how*)
2. Which barriers and enablers need to be addressed?

Theoretical Domains Framework
Michie et al QSHC 2005
Cane et al Imp Sci 2012

Understanding diagnosis and management of dementia and guideline implementation in general practice: a qualitative study using the theoretical domains framework

Kerry Murphy1, Denise A O’Connor1*, Colette J Browning2, Simon D French3, Susan Michie4, Jill J Francis5, Grant M Russell6, Barbara Workman1, Leon Flicker7, Martin P Eccles8 and Sally E Green9

Abstract

Background: Dementia is a growing problem, causing substantial burden for patients, their families, and society. General practitioners (GPs) play an important role in diagnosing and managing dementia; however, there are gaps between recommended and current practice. The aim of this study was to explore GPs’ reported practice in diagnosing and managing dementia and to describe, in theoretical terms, the proposed explanations for practice that was and was not consistent with evidence-based guidelines.

Methods: Semi-structured interviews were conducted with GPs in Victoria, Australia. The Theoretical Domains Framework (TDF) guided data collection and analysis. Interviews explored the factors hindering and enabling achievement of 13 recommended behaviours. Data were analysed using content and thematic analysis. This paper presents an in-depth description of the factors influencing two behaviours, assessing comorbid depression using a validated tool, and conducting a formal cognitive assessment using a validated scale.

Results: A total of 30 GPs were interviewed. Most GPs reported that they did not assess for co-morbid depression using a validated tool as per recommended guidance. Barriers included the belief that depression can be adequately assessed using general clinical indicators and that validated tools provide little additional information (theoretical domain of Beliefs about consequences); discomfort in using validated tools (Emotion); possibly due to limited training and confidence (Skills; Beliefs about capabilities); limited awareness of the need for, and forgetting to conduct, a depression assessment (Knowledge; Memory, attention and decision processes). Most reported practising in a manner consistent with the recommendation that a formal cognitive assessment using a validated scale be undertaken. Key factors enabling this were having an awareness of the need to conduct a cognitive assessment (Knowledge), possessing the necessary skills and confidence (Skills; Beliefs about capabilities), and having adequate time and resources (Environmental context and resources).
Example: Assessing for co-morbid depression using a validated tool

<table>
<thead>
<tr>
<th>Domain</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>not aware depression as part of dementia diagnosis</td>
</tr>
<tr>
<td>Beliefs about consequences</td>
<td>belief that using validated tool doesn’t provide additional useful information; believe patients can self-report depression so validated tool unnecessary</td>
</tr>
<tr>
<td>Skills</td>
<td>limited training/experience in using validated depression tools</td>
</tr>
<tr>
<td>Beliefs about capabilities</td>
<td>limited confidence in administering validated tools; confident in use of general indicators; confident in ability to detect presence of depression in patients without assessment</td>
</tr>
<tr>
<td>Emotion</td>
<td>uncomfortable administering validated depression tools</td>
</tr>
<tr>
<td>Memory, attention and decision processes</td>
<td>aware should assess depression but sometimes forget to do</td>
</tr>
</tbody>
</table>
3. Which intervention components could overcome the modifiable barriers and enhance the enablers?

Factors that need to change (barriers and enablers per behaviour)

Qualitative study¹

Techniques theorised to alter or redirect these factors

Theory-technique matrix², Behaviour change technique and theory descriptions³,⁴

Modes of delivery (likely to be effective, feasible, acceptable)

Cochrane EPOC reviews⁵, IRIS Advisory Committee

Example: Assess for co-morbid depression using a validated tool

<table>
<thead>
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<th>Factors that need to change</th>
<th>Techniques</th>
<th>Modes of delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>• Information provision</td>
<td>• Keynote presentations by opinion leaders</td>
</tr>
</tbody>
</table>
| Skills/ Beliefs about capabilities | • Modelling/demonstration by credible expert  
• Rehearsal  
• Social processes of encouragement and support | • Skills demonstration session by opinion leader  
• Small group practical sessions with simulated patients (trained actors) |
| Beliefs about consequences   | • Persuasive communication | • Keynote presentations  
• Facilitated small group discussions |
| Environmental context and resources | • Environmental changes/ objects to facilitate behaviours | • Provision of tools and instructions on how to upload to practice software |
Key messages

- The IRIS research translation intervention was developed tailored to prospectively identified barriers and informed by theory, evidence and feasibility/acceptability considerations.

- The intervention, delivered via an interactive educational workshop and incorporating 11 behaviour change techniques, is undergoing evaluation in a cluster randomised trial.

- If demonstrated to be effective the IRIS intervention can be implemented more widely.

- Results of the IRIS trial will contribute to the empirical and theoretical base needed to optimise future research translation interventions due to its explicit rationale for design and evaluation along the causal pathway.
Acknowledgements

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  - Dr Diane Calleja, Dr Maree Farrow, Ms Diana Fayle, Dr Craig Fry, Dr Robert Gingold, Mrs Deborah Harvey, Ms Pamela Hore, Ms Robyn Hyett, Professor Rhonda Nay, Ms Louise Riley, Ms Lee Stamford, Dr Stephanie Ward
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  - Sally Green (CIA), Colette Browning, Martin Eccles, Leon Flicker, Jill Francis, Simon French, Jeremy Grimshaw, Claire Harris, Lana Kluchareff, Fiona Kossenas, Joanne McKenzie, Susan Michie, Duncan Mortimer, Kerry Murphy, Daniel O’Connor, Denise O’Connor, Grant Russell, Neil Spike, Barbara Workman
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