Building workforce capacity in rheumatoid arthritis using policy-into-practice and digital strategies

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Evidence-informed service re-design initiatives  

**Upskilling consumers and health professionals**  

**Optimising service delivery in primary care**  

**Practice behaviours in the emerging health workforce**  

**ICT solutions to build capacity**  
[Fary et al [in review]]
Building workforce capacity: a phased approach

1. Policy platform – barriers & enablers sustainable implementation
2. Identify ‘know’ and ‘do’
4. Develop, deliver and evaluate an engaging resource
5. Evaluate the effectiveness of RAP-eL
6. Implementation
Rheumatoid arthritis for physiotherapists

- **Four modules**
  1. Disease and recognition
  2. Early stage
  3. Chronic stage
  4. Extra-articular features and co-morbidities
- Case studies [quizzes]
- Evidence & practice summaries
- Practice tools and resources
- Flexible learning environment
Aim 1: effectiveness

- Single-blind, parallel, RCT
  - Recruitment [WA/NSW; cross care settings]
  - n=104
  1. Intervention group access to RAP-eL for 4 week period
  2. Control group waitlisted: access to RAP-eL: @ 5 weeks post intervention group completion
Phase 5 evaluate effectiveness

Aim 2: retention

- Repeated measures cohort [n=63] follow up study
  - 8 weeks post completion of RAP-eL
  - Pooled post intervention data
Study design

Primary outcome

Self reported confidence in knowledge and skills to manage people with RA

- 9 confidence knowledge statements [score x/45]
- 8 confidence skills statements [score x/40]
- 5-point Likert
### Study design

#### Secondary outcomes

**Satisfaction** with ability to manage people with RA

- 10-point Likert

**Clinical vignettes** – pre-diagnosis & early stage RA

- Free text responses converted to scores
- Out of 9 for pre-diagnosis and 7 for early stage

**Six clinical questions**

- 5-point Likert
# Results – participant characteristics

<table>
<thead>
<tr>
<th></th>
<th>Control (n=48)</th>
<th>Intervention (n=56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (no.(%) female)</td>
<td>38 (81.3)</td>
<td>44 (78.6)</td>
</tr>
<tr>
<td>Years as registered physiotherapist (mean (SD))</td>
<td>18 (12.1)</td>
<td>15 (11.3)</td>
</tr>
<tr>
<td>Years in clinical practice as a physiotherapist (mean (SD))</td>
<td>16 (11.7)</td>
<td>14 (10.0)</td>
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<tr>
<td>Currently engaged in clinical practice (no. (%) yes)</td>
<td>46 (95.8)</td>
<td>50 (89.3)</td>
</tr>
<tr>
<td>Currently treating patients with RA (no. (%) yes)</td>
<td>33 (68.8)</td>
<td>40 (71.4)</td>
</tr>
<tr>
<td>Percentage caseload in RA (no. (%) yes)</td>
<td>10 (15.5)</td>
<td>6 (7.6)</td>
</tr>
<tr>
<td>Currently teaching in RA (no. (%) yes)</td>
<td>2 (4.2)</td>
<td>1 (1.8)</td>
</tr>
<tr>
<td>Primary location of work (no. (%))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public hospital</td>
<td>17 (35.3)</td>
<td>24 (42.9)</td>
</tr>
<tr>
<td>Private practice</td>
<td>13 (27.1)</td>
<td>16 (28.6)</td>
</tr>
</tbody>
</table>
Results - randomised controlled trial

Disease and recognition of rheumatoid arthritis

Module 1

Key topics

- What is rheumatoid arthritis?
- Is rheumatoid arthritis significant?
- The main clinical features of early rheumatoid arthritis
- How to recognise early rheumatoid arthritis
- Your role as a physiotherapist
<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Control (n=48) baseline</th>
<th>Intervention (n=56) baseline</th>
<th>Control (n=48) 4 weeks</th>
<th>Intervention (n=56) 4 weeks</th>
<th>B/w Group adjusted mean difference at 4 weeks (95% CI)</th>
<th>p-value*</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence knowledge (/45)</td>
<td>21 (5)</td>
<td>23 (6)</td>
<td>22 (5)</td>
<td>31 (8)</td>
<td>8.5 (6.3 to 10.7)</td>
<td>&lt;0.001</td>
<td>1.6</td>
</tr>
<tr>
<td>Confidence skills (/40)</td>
<td>17 (4)</td>
<td>19 (6)</td>
<td>19 (5)</td>
<td>27 (8)</td>
<td>7.3 (5.1 to 9.4)</td>
<td>&lt;0.001</td>
<td>1.5</td>
</tr>
<tr>
<td>Satisfaction manage (/10)</td>
<td>3 (2)</td>
<td>4 (2)</td>
<td>4 (2)</td>
<td>6 (2)</td>
<td>2.1 (1.4 to 2.7)</td>
<td>&lt;0.001</td>
<td>1.2</td>
</tr>
<tr>
<td>vignette pre-Dx (/6)</td>
<td>3 (1)</td>
<td>3 (1)</td>
<td>3 (1)</td>
<td>4 (1)</td>
<td>0.8 (0.4 to 1.2)</td>
<td>&lt;0.001</td>
<td>0.5</td>
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<tr>
<td>vignette early RA (/9)</td>
<td>3 (2)</td>
<td>3 (2)</td>
<td>3 (2)</td>
<td>5 (2)</td>
<td>1.5 (0.9 to 2.1)</td>
<td>&lt;0.001</td>
<td>0.9</td>
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<tr>
<td>Clinical questions (possible scores 1-5)</td>
<td>Control (n=48) Baseline (Median (range))</td>
<td>Intervention (n=56) Baseline (Median (range))</td>
<td>Control (n=48) 4 weeks Number improved</td>
<td>Intervention (n=56) 4 weeks Number improved</td>
<td>p-value Mann Whitney U</td>
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<tr>
<td>RA affects the musculoskeletal system only</td>
<td>4 (3-5)</td>
<td>4.5 (4-5)</td>
<td>8</td>
<td>18</td>
<td>0.019</td>
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<tr>
<td>Early recognition and treatment is associated with improved outcomes</td>
<td>4 (1-5)</td>
<td>4 (1-5)</td>
<td>10</td>
<td>20</td>
<td>0.076</td>
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<tr>
<td>Extra-articular features associated with RA are usually due to vasculitis</td>
<td>3 (2-5)</td>
<td>3 (1-5)</td>
<td>7</td>
<td>20</td>
<td>0.116</td>
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<tr>
<td>RA drugs cause side-effects but side-effects have little relevance to physiotherapy</td>
<td>4 (1-5)</td>
<td>4 (2-5)</td>
<td>3</td>
<td>18</td>
<td>&lt;0.001</td>
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<tr>
<td>Cardiac, neuro and pulmonary effects of RA may require modification of physiotherapy</td>
<td>4 (1-5)</td>
<td>4 (2-5)</td>
<td>4</td>
<td>27</td>
<td>&lt;0.001</td>
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<tr>
<td>Suspicion of atlanto axial instability should alert clinicians to risks with manual therapy</td>
<td>5 (1-5)</td>
<td>5 (3-5)</td>
<td>6</td>
<td>11</td>
<td>&lt;0.001</td>
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Phase 6. Implementation

- Our partners

- Current implementation initiatives

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Discussion

- RAP-eL is a promising tool to upskill physiotherapists and is accessible, effective and sustainable
- Learning retained over an eight week period post-RCT
- Feedback positive
- Attrition high: consistent with online survey responses
- Clinical practice behaviors or consumer outcomes?
Acknowledgements

- Consumers with RA who contributed to every step in this process including sharing their stories in RAP-eL
- Ms Julia Ngeow (AV content) and Mr Ben Low (web design)
- Expert panel who reviewed RAP-eL
  - Mr Ben Hogan, Mrs Peggy Briggs, Dr Irwin Lim, A/Prof Susanna Proudman, Dr Connie Price, Ms Alison Wigg, Prof Lucie Brosseau
- Funding: Physiotherapy Research Foundation, Department of Health (WA), NHMRC (fellowship), Curtin University School of Physiotherapy and Exercise Science, Arthritis and Osteoporosis WA
Expressions of interest (n=160)

Randomised (n=159)

Control group (n=79)
Responded to baseline survey (n=48)
• Did not respond (n=28)
• Incomplete response (n=3)

(n=43)
Did not respond (n=4)
Withdrawn (n=1)
Analysed (n=48)
Blind intention to treat

Intervention group (n=80)
Responded to baseline survey (n=56)
• Did not respond (n=21)
• Incomplete response (n=2)
• Withdrew (n=1)

(n=43)
Did not respond (n=8)
Withdrawn (n=5)
Analysed (n=56)
Blind intention to treat
Flow chart cohort study

End of RCT 4 weeks

Control group (n=43)
- Access to RAP-eL intervention for 4 weeks
- Post intervention (n=34)
  - Did not respond (n=6)
  - Incomplete response (n=1)
  - Withdrew (n=2)

Intervention group (n=43)
- Post intervention

8 weeks

12 weeks

16 weeks

8 week follow up (n=38)
- Did not respond (n=2)
- Incomplete response (n=3)

Analysed combined cohort (n=63)
Per protocol