Gaps in GP Education – Demonstrating that breastfeeding education for GP registrars works.

Dr Ben Mitchell
Dr Wendy Brodribb
A Story…

Dr B, who is a GP registrar
Late twenties, no children of his/her own
Basic Term registrar

A patient, Jane, who is fully breastfeeding her one month old child, asks, “Can I give him some water?”

Dr B replies “Umm…”
Background

GP registrars in Australia have low knowledge in the area of breastfeeding and managing its problems (Brodribb 2008)

Best predictors of better breastfeeding knowledge is having self or partner experience of breastfeeding >26 weeks (Brodribb 2008)

GP’s should have an understanding of breastfeeding and how to manage common problems

GP’s are in a ideal position to manage and provide support to breastfeeding women
Where does it fit in?

Less than 50% of GP registrars remembered learning about breastfeeding in medical school (Brodribb, 2009)
Could we teach them?  
Aims of study:

I. To show that educating GP registrars about breastfeeding problems improved registrar knowledge, attitudes and practice

II. Is including breastfeeding education achievable and acceptable to registrars, in the current training environment?

Ethics approval UQ ethics committee
Funding via Registrar Research Fund
Methods & Materials

Participants were GP registrars of CSQTC attending their education session (mostly basic term registrars)

Quasi Cluster-randomized controlled trial

Wait list control group

Intervention group receives a tutorial session on breastfeeding

Questionnaire

96 item, previously used & validated questionnaire

14 novel practice behaviour questions

Included demographics, questions on their attitudes to the doctors role, attitudes towards breastfeeding and their knowledge of breastfeeding and their confidence
Recruitment and Randomization

CSQTC

Metropolitan North Node
n = 15

Central Coast Node
n = 8

Sunshine Coast Node
n = 7

Control group n = 23

Intervention group n = 25

Metropolitan North Node
n = 18

Sunshine Coast 
Node
n = 7
**intervention**

- intervention group $n = 25$
- control group $n = 23$

**questionnaire**

- intervention group $n = 11$
- control group $n = 11$

Time points:
- T1
- T2
- T3

Two months
Intervention

• Three hour tutorial face to face at usual training time
• Webinar style for one rural group
  (Yes they stayed awake for three hours)
• Topics included benefits of breastfeeding, early and late breastfeeding problems, assessing supply, medications, etc.
• Feedback sheets returned at the end
Feedback from Registrars

Very useful I think all GP’s would learn from it, not just registrars

Great resources and information It was very helpful and will definitely be useful in practice

Very useful Absolutely necessary Too much detail to retain

Must continue for basic trainees

Very Useful Much Needed Education

Lengthy but comprehensive Absolutely, not covered well elsewhere

Absolutely Could be a bit longer

Yes excellent level Good level of info provided

Aimed at correct level for GP registrars

Great resources provided Possibly split into 2 sessions

Absolutely
### Baseline Characteristics of Study Participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Intervention (N=25)</th>
<th>Control (N=23)</th>
<th>Total (N=48)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age (yrs)</td>
<td>31.64</td>
<td>32.69</td>
<td>32.14</td>
<td></td>
</tr>
<tr>
<td>Number female</td>
<td>19</td>
<td>17</td>
<td>36</td>
<td>75.00</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan</td>
<td>18</td>
<td>15</td>
<td>33</td>
<td>68.75</td>
</tr>
<tr>
<td>Rural</td>
<td>7</td>
<td>8</td>
<td>15</td>
<td>31.25</td>
</tr>
<tr>
<td>Country of medical degree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>20</td>
<td>20</td>
<td>33</td>
<td>83.33</td>
</tr>
<tr>
<td>Overseas</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td>16.67</td>
</tr>
<tr>
<td>Stage of GP training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>22</td>
<td>20</td>
<td>42</td>
<td>87.50</td>
</tr>
<tr>
<td>Own children</td>
<td>9</td>
<td>10</td>
<td>19</td>
<td>39.58</td>
</tr>
<tr>
<td>Percent breastfed</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Length of breastfeeding experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;26 weeks</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>12.50</td>
</tr>
<tr>
<td>&gt;26 weeks</td>
<td>5</td>
<td>7</td>
<td>12</td>
<td>25.00</td>
</tr>
</tbody>
</table>
Mean Score Intervention Group

Mean Score Control Group
## Sample of poorly answered knowledge questions (baseline)

<table>
<thead>
<tr>
<th>Question</th>
<th>% participants correctly answered</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoxycillin is the drug of choice to treat mastitis in a woman 3 months postpartum (false)</td>
<td>55</td>
<td>23</td>
</tr>
<tr>
<td>Breastfed infants require extra water in hot weather (false)</td>
<td>51.3</td>
<td>20</td>
</tr>
<tr>
<td>A breastfeeding woman should be advised to wean if she becomes pregnant (false)</td>
<td>42.5</td>
<td>17</td>
</tr>
<tr>
<td>Growth of breastfed infants differs from that of formula fed infants (true)</td>
<td>39.5</td>
<td>15</td>
</tr>
<tr>
<td>Breastfeeding is contraindicated for women with Hepatitis C (false)</td>
<td>30.8</td>
<td>12</td>
</tr>
<tr>
<td>Antenatal nipple preparation prevents nipple soreness in the first week postpartum (false)</td>
<td>23.1</td>
<td>9</td>
</tr>
<tr>
<td>It is normal for an adequately breastfed 2-week old infant to only pass a bowel motion every 3 days or so (false)</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Increasing her fluid intake will increase a mother’s milk supply. (false)</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>A ‘top-up’ bottle after each breastfeed is the best way to manage an infant who is not gaining weight adequately (false)</td>
<td>17.9</td>
<td>7</td>
</tr>
</tbody>
</table>
Improvement in Knowledge Score

Mean Knowledge Score vs Time (N=22)

Mean Knowledge Score

Time (months)

Control
Intervention

baseline  $t = -0.23$  $p = 0.82$

two months  $t = 1.297$  $p = 0.21$  $\eta^2 = 0.08$
Change in mean Confidence Scores (N=22)

Mean confidence Score (0-5)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Baseline</th>
<th>t = -0.98</th>
<th>p = 0.32</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>2.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Baseline: t = -0.98, p = 0.32
Two months: t = 1.36, p = 0.18, $\eta^2 = 0.08$
So what?

Shown that GP registrars need some teaching in this area
While good attitudes are important, its not enough when we don’t have the knowledge to go with it
They do well when taught
They want this teaching

How important is it?
Thank you

Dr Wendy Brodribb
GPET / Registrar Research Fund
Node Medical Educators CSQTC
GP registrars of CSQTC