Submission – Pharmacy Remuneration and Regulation Review

1. Thank you for the opportunity to comment on the Discussion Paper reviewing Pharmacy Remuneration and Regulation.

2. A key issue raised by the discussion paper is whether the current business model presents a dilemma between ethical supply of medications and advice, public health and economic viability. Attached is our recent publication which may be informative to your consideration of this issue. This study was based on research conducted from the ANU Medical School during 2013.

3. We submit, based on the interview of pharmacists in this research publication, that public health may be undermined by the current competitive business model, whereby pharmacists can be motivated to promote sale of milk formula and associated products which can undermine breastfeeding. Pharmacists themselves were concerned at the lack of necessary expertise in infant feeding and the effects of competition and the current business model on inappropriate promotion of infant feeding products by pharmacies and pharmacists.

4. Pharmacists are highly trained yet poorly remunerated- our research detailed that pharmacists are very willing to broaden their clinical skills into the area of lactation support and counselling, however this would require some way for pharmacy to recoup cost outlays for private rooms, training, and time spent with customers.

5. A driving force in sometimes inappropriate promotion involves the increased role of supermarkets in marketing and sale of breastmilk substitutes in competition with pharmacies. While for many products, lower prices benefits the consumer, as recognised by the ACCC in its regulation of the milk formula industry in Australia, the potential adverse impact on breastfeeding makes the marketing and sale of milk formula products a special case. Information on this issue and the June 2016 ACCC determination is available at https://www.accc.gov.au/media-release/agreement-to-restrict-advertising-of-infant-formula.

6. The World Health Organisation (WHO) International Code on the Marketing of Breastmilk Substitutes places responsibilities on health professionals including pharmacists and industry regarding protection of breastfeeding from inappropriate promotion. Regarding Australia’s implementation of the WHO International Code, there has previously been support for a code of practice for retailers. The Knowles Report in 2000 recommended that retailers, including supermarkets and pharmacies, develop a voluntary code of practice. Complaints about retailer activity have comprised the majority of out-of-scope complaints to the self-regulatory body about marketing of breastmilk substitutes in Australia. These
complaints usually refer to supermarkets and pharmacy advertisements, price promotion, specials catalogues and window displays.

7. The Parliamentary Best Start Inquiry in 2007 investigated the implementation of the WHO International Code in Australia and expressed its concerns that ‘the marketing practices of retailers such as pharmacies and supermarkets are also worrying.’ It also stated its concerns that health professionals were being used by manufacturers as ‘surrogate marketers’ of their products via distribution of free infant formula sample packs to mothers, because this was implicit endorsement of products. The Inquiry report called for ‘a decisive and clear statement of the importance of breastfeeding to the Australian community’.

Conclusion and Recommendation

1. Reflecting the policy of Australian governments regarding optimal infant and young child feeding, pharmacy regulation should recognise the particular responsibilities of health workers regarding promotion of breastmilk substitutes, and the effects of the business model in supporting or undermining these responsibilities. There remains the need for suitable mechanisms for implementation, monitoring and enforcement of compliance with the WHO International Code in the Australian pharmacy industry, and the regulatory review should address this need.

2. We urge the Pharmacy Remuneration and Regulation Review to consider the important public health issues surrounding the promotion of foods for infants and young children, and how the remuneration and regulation of pharmacies affects optimal breastfeeding of infants and young children, as part of examining the regulation of the pharmacy industry.

3. We urge the Review to utilise the availability of highly trained pharmacists by piloting new remuneration models that allow specialisation in areas of clinical need such as in lactation support.

We would be pleased to provide further information and references.

Sincerely,

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Breastfeeding knowledge, attitudes and training amongst Australian community pharmacists

ABSTRACT

Introduction
Pharmacists are one of the most accessible and trusted professionals in the Australian health care system and can have a large impact in supporting and encouraging breastfeeding.

Aim
This study aimed to research the knowledge, attitudes and training satisfaction of Australian pharmacists in the area of infant nutrition and breastfeeding.

Design, setting and participants
The mixed method study involved quantitative data collection via an online survey and qualitative data collected via separate semi-structured interviews. All registered pharmacists in the Australian Capital Territory and surrounding regional areas were eligible. Participants were recruited via emailed information sheets and individual onsite recruitment.

Key findings
Positive attitudes towards and a desire to support and advocate for breastfeeding by pharmacists were hampered by a lack of knowledge, confidence, training and education.

Conclusions and future implications
Government or other non-profit organisations can enhance community-based support for breastfeeding, including developing new education and training programs for pharmacy students and pharmacists.

Keywords: pharmacists; education; ethics; health knowledge, attitudes, practice*; breastfeeding support, promotion

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INTRODUCTION
Pharmacists occupy an important yet dichotomous position in the Australian healthcare landscape. This is illustrated most pointedly when it comes to the provision of breastmilk substitutes and breastfeeding advice. Pharmacies are one of the most trusted and accessible primary care providers for breastfeeding women and their families, yet they are also businesses which depend on front of shop revenue for survival. The pharmacy industry in Australia is currently undergoing a structural change away from fees for dispensing medication and towards a ‘fee for service’ model, in which pharmacists are paid commensurate to the advice and counselling they give customers. However, currently no fee for advice model exists at a level to compensate for falling revenues and growing supermarket competition (Nicholson, 2013; Clarke, 2014). Under professional ethical standards recommended by the World Health Assembly since 1981,
in the form of the World Health Organization International Code of Marketing of Breastmilk Substitutes, pharmacies should not actively market artificial baby milk products to consumers (World Health Organization [WHO], 1981). If pharmacists can one day charge a fee for expert breastfeeding advice, are they up to the challenge? And until that day, is there a potential conflict between selling formula and accessories and breastfeeding advocacy?

The association between breastfeeding and optimal health outcomes for infants and children is well established by research. Premature weaning is associated with increased rates of non-specific gastrointestinal infection, respiratory infection, asthma, eczema and sudden infant death syndrome; type 2 diabetes mellitus and obesity in later life. (Chung et al., 2007; Eidelman et al., 2012). The myriad health advantages imparted by breastfeeding give it status as an important public health measure and the public health care costs incurred by the premature weaning of infants are significant (Smith, Thompson, & Ellwood, 2002; Quigley, Kelly, & Sacker, 2007; Bartick & Reinhold, 2010; Bartick et al., 2013; Pokhrel et al., 2014).

Australia has a high breastfeeding initiation rate, at 96%, but only a minority of babies are optimally fed for the first year of life, with half of all babies (49%) no longer exclusively breastfed by 2 months of age (Australian Institute of Health and Welfare, 2011; Ayton, van der Mei, Wills, Hansen & Nelson, 2015). WHO guidelines recommend exclusive breastfeeding, defined as breastmilk only without any other food or drink, for the first 6 months of life and breastfeeding in addition to complementary foods to 2 years and beyond. This is reflected in the Australian National Health and Medical Research Council (NHMRC) recommendations that babies be breastfed until 12 months and beyond (Kramer & Kakuma, 2007; National Health and Medical Research Council [NHMRC], 2012).

So what is creating the difference between the ideals and actuality of breastfeeding in Australia? The breastfeeding relationship is influenced by multiple maternal factors such as socioeconomic status, education and health literacy, maternal intention, maternal confidence and external support (Ayton et al., 2015; Renfrew, McCormick, Wade, Quinn & Dowswell, 2012; Tawia, 2012; Chalmers, 2013). Health professionals have the potential to intervene in many of these areas to positively influence the duration and exclusivity of the breastfeeding relationship. Australian research has demonstrated that individual antenatal consultation can decrease breastfeeding cessation rates at 12 months by 50 per cent (Pannu, Giglia, Binns, Scott & Oddy, 2011). The improvement in breastfeeding outcomes stemming from greater health professional education is also well established, including by randomised controlled trials (Kramer et al., 2001; Zakaria-Grković & Burmaz, 2010; Pannu et al., 2011; Renfrew et al., 2012).

To be effective advocates for breastfeeding, health care professionals should ensure their education and confidence in advising women is up to the task and community pharmacy in Australia is performing below expectations (DiGirolamo, Grummer-Strawn & Fein, 2003; Maher & Hughes, 2013; Smith, Dunstone & Elliot-Rudder, 2008; Stuebe, 2009). Studies focussing on Australian pharmacists and their provision of breastfeeding information are underrepresented in the literature and predominantly only assess pharmacists’ knowledge of medication use in lactation (Ronai, Taylor, Dugan & Feller, 2009; Jayawickrama, Amir & Pirotta, 2010; Hussainy & Dermele, 2011). Medical practitioners report poor formal education regarding breastfeeding and, as a result, lack knowledge in the area, despite the same research suggesting that they maintain positive attitudes towards breastfeeding (Brodribb, Fallon, Jackson & Hegney, 2008; Smith, Dunstone & Elliot-Rudder, 2008; Brodribb, Fallon, Jackson & Hegney, 2010; Jayawickrama, Amir & Pirotta, 2010). We aim to expand on overseas research into the role of pharmacists in the area of breastfeeding and infant nutrition by investigating the knowledge, attitudes and training and education experience of Australian community pharmacists regarding breastfeeding management and support (Ronai et al., 2009; Edwards, 2014; Lenell, Friesen & Hormuth, 2015).

METHOD
A mixed methods study, this research employed a pre-tested online questionnaire sent to approximately 60 pharmacies across the ACT and nearby regional areas and a series of semi-structured interviews with seven registered pharmacists. All 396 practising pharmacists in the ACT as at March 2013 were eligible participants, with the study open to registered pharmacists. As the study was primarily assessing breastfeeding knowledge from undergraduate training, pre-registration graduate pharmacists were also encouraged to participate.

Online survey
The survey of ACT pharmacists was open for ten weeks during early 2014.

Recruitment for the online survey was through invitations and information sheets emailed to pharmacies via pharmaceutical organisations and franchises in the area, such as the Capital Chemist group and the ACT branch of the Australian Pharmacy Guild newsletter. Pharmacists were also encouraged to recruit other pharmacists into completing the questionnaire.

The questionnaire was initially produced by the study authors and tested for clarity through consultation with a focus group (see below). The final survey was delivered online using the Survey Monkey web portal. There remained the option for hard copies to be delivered on request.
The online questionnaire gathered quantitative data on the broad demographics of participants, such as age, gender, years of experience as a registered pharmacist and the state or territory where they completed their tertiary pharmacy training. This was followed by questions gaining information about satisfaction with training during their initial tertiary training, any subsequent training in breastfeeding and personal experience, via a question about number of children and the length of breastfeeding with their youngest child. A series of 27 general knowledge and attitudinal items were included at the end of the survey to assess the broad attitudes and breastfeeding support capabilities of those completing the survey.

The questionnaire also recorded current levels of satisfaction with the provision of education and training within the pharmacy community, including a question regarding the types of education and training pharmacists would find most beneficial in this area and how it should be provided in the future.

Focus group
An initial focus group of eight participants were recruited via a Pharmacy Guild (Australia Capital Territory Branch) pharmacist education event on infant nutrition, which was run in conjunction with Nutricia Australia. This focus group of pharmacists was asked to review and validate vignette scenarios used later in the semi-structured interviews. This event was chosen as attendees were demonstrating through their attendance a degree of engagement in the issue.

Semi-structured interviews
Interview participants were recruited via an interview participant information form mailed to all ACT pharmacies and subsequent follow-up contact either in person or via phone. Seven participants responded and all were interviewed.

These interviews collected demographic data including age and breastfeeding experience, but predominantly gathered qualitative data from currently practising community pharmacists to clarify and expand issues related to breastfeeding and pharmacy practice. The interviews included a series of four clinical scenarios outlining scenarios commonly seen in community pharmacy: the provision of breastfeeding advice to a pregnant woman; constipation in a breastfed baby; sore, cracked nipples/mastitis and the transition of a baby into eating solid foods. These vignettes were included to broadly assess the confidence of the pharmacist when confronted with such scenarios, which were assessed by the focus group as being common presentations in community pharmacy. The appropriateness of their responses was assessed in line with published infant feeding guidelines from the NHMRC and WHO.

Data analysis
The questionnaire items in the online survey on general knowledge and attitude items were scored on a Likert 5 point scale. Each question was rated from 1–5 based on the selection from Strongly Agree (which scored 1.00) through to Strongly Disagree (which scored 5.00). Positively phrased questions were then adjusted to allow uniform scoring of each item out of 5. Interview transcripts were manually analysed to identify key themes and illustrative comments.

Data analysis and graphs were produced using Microsoft Excel v14 (Microsoft Corporation 2010).

Ethics approval
Ethical approval for this study was obtained from the Australian National University Human Research Ethics Committee, protocol number 2013/474.

RESULTS
Quantitative results
A total of twenty participants completed the online survey. The demographic data for these participants are given in Table 1.

Few pharmacists were satisfied with their level of training on breastfeeding (Figure 1). Only seven considered their tertiary training provided them with adequate training in this area.

Table 1. Demographic data from questionnaire cohort.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants</td>
<td>20</td>
</tr>
<tr>
<td>Mean age</td>
<td>34 years (SD=12.1)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>15 female (75%)</td>
<td></td>
</tr>
<tr>
<td>5 male (5%)</td>
<td></td>
</tr>
<tr>
<td>Number of participants who are parents</td>
<td>11 (55%)</td>
</tr>
<tr>
<td>Average age in years of youngest child (range)</td>
<td>12 (3 months–30 years)</td>
</tr>
<tr>
<td>Number who breastfed youngest child</td>
<td>10 (50%)</td>
</tr>
<tr>
<td>Average duration of breastfeeding of youngest child (range)</td>
<td>12 months (6–24 months)</td>
</tr>
<tr>
<td>State or territory of training</td>
<td></td>
</tr>
<tr>
<td>NSW, 14 (70%)</td>
<td></td>
</tr>
<tr>
<td>ACT, 2 (10%)</td>
<td></td>
</tr>
<tr>
<td>VIC, 1 (5%)</td>
<td></td>
</tr>
<tr>
<td>QLD, 2 (10%)</td>
<td></td>
</tr>
<tr>
<td>SA, 1 (5%)</td>
<td></td>
</tr>
<tr>
<td>TAS, 0 (0%)</td>
<td></td>
</tr>
</tbody>
</table>
The Australian Breastfeeding Association (ABA) was the most common source used by pharmacists in the provision of breastfeeding advice, with 60% (12) of pharmacists selecting it as a source they relied on for breastfeeding information. This was followed by journals and textbooks (43%), personal experience (38%) and family and friends (33%), conferences and seminars (29%), internet sites (24%), formula manufacturers (24%). Professional pharmacy organisations received much lower scores, with the Pharmaceutical Society of Australia selected by 14% and no pharmacists selecting the Pharmacy Guild of Australia or the Australian College of Pharmacy as a source they used for breastfeeding information. MotherSafe and the Royal Women's Hospital in Melbourne were both used by 5% (1) of respondents.

No pharmacists had undertaken formal professional education courses in breastfeeding management, one respondent (5%) had undertaken research and published in the area and one respondent was considering becoming a volunteer for the ABA.

The most common modes utilised for continuing professional development and education were web based, paper based, such as journals, and seminars and workshops, with no clear preference for any one method. These findings are represented in Table 2.

No pharmacist was asked about breastfeeding issues on a daily basis, but 20% (4 pharmacists) were approached two to three times a week, 25% (5) approached once a week, 20% (4) approached less than once a week but more frequently than once a month and 25% (5) said they dealt with breastfeeding issues in the pharmacy less than once a month. The most common reasons behind requests for pharmacist advice are summarised in Table 2.

Concerns about infant hunger or maternal nipple care were predominant, but perceived inadequate milk supply, infant weight gain or sleep concerns were also common.

The most common ages of infants presenting to pharmacy was 1–3 months of age (selected with a frequency [n] of 11), followed by neonates less than 1 month of age and infants 4–6 months old (n=4 and n=3 respectively). Older children between 6–9 months and 9 months were infrequent presentations (n=1 each).

When referring patients to a third party for breastfeeding advice, general practitioners were chosen most frequently (n=11) followed by the Australian Breastfeeding Association (ABA) (n=8), lactation consultants (n=2) and the hospital (n=1). Sources of information used most frequently to direct customer enquiries were Pharmaceutical Society of Australia self-care cards (n=7), ABA websites and booklets (n=6), MotherSafe information sheets (n=6) and free formula samples (n=6). Sixteen (80%) of respondents correctly identified the WHO recommendations for breastfeeding and 15 (75%) correctly identified the current NHMRC guidelines for breastfeeding.
Table 3. Condensed results of online questionnaire general knowledge and attitude items.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree n (%)</th>
<th>Neither agree nor disagree n (%)</th>
<th>Disagree n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula and breast milk are equally acceptable feeding methods for infants (n=20)</td>
<td>11 (55)</td>
<td>1 (5)</td>
<td>8 (40)</td>
</tr>
<tr>
<td>All babies should be transitioned to formula by 12 months of age (n=20)</td>
<td>4 (20)</td>
<td>3 (15)</td>
<td>13 (65)</td>
</tr>
<tr>
<td>Modern infant formulas are nutritionally similar to breast milk (n=19)</td>
<td>13 (68)</td>
<td>2 (10)</td>
<td>4 (21)</td>
</tr>
<tr>
<td>Babies should be given solid food at 4 months of age (n=20)</td>
<td>6 (30)</td>
<td>6 (30)</td>
<td>8 (40)</td>
</tr>
<tr>
<td>It is illegal to stop a woman from breastfeeding in any place she is allowed to be (n=20)</td>
<td>15 (75)</td>
<td>2 (10)</td>
<td>3 (15)</td>
</tr>
<tr>
<td>Breastfeeding reduces the risk of breast cancer in the mother (n=20)</td>
<td>8 (40)</td>
<td>7 (35)</td>
<td>5 (25)</td>
</tr>
<tr>
<td>Formula supplementation can result in breastfeeding failure (n=20)</td>
<td>10 (50)</td>
<td>2 (10)</td>
<td>8 (40)</td>
</tr>
<tr>
<td>Supporting breastfeeding is an important part of my job as a pharmacist (n=20)</td>
<td>16 (80)</td>
<td>1 (5)</td>
<td>3 (15)</td>
</tr>
<tr>
<td>There is too much emphasis put on the importance of breastfeeding (n=20)</td>
<td>6 (30)</td>
<td>3 (15)</td>
<td>11 (55)</td>
</tr>
<tr>
<td>It is normal for mothers to require support from a range of health care professionals to breastfeed successfully (n=20)</td>
<td>19 (85)</td>
<td>–</td>
<td>1 (5)</td>
</tr>
<tr>
<td>Managing the transition of mothers from breastfeeding to formula is an important part of the pharmacy business model (n=20)</td>
<td>6 (30)</td>
<td>4 (20)</td>
<td>10 (50)</td>
</tr>
<tr>
<td>I feel I am able to allocate enough time to properly manage breastfeeding enquiries (n=20)</td>
<td>9 (45)</td>
<td>2 (10)</td>
<td>9 (45)</td>
</tr>
<tr>
<td>Infant formula manufacturers exert too much influence on the education market for pharmacists (n=20)</td>
<td>8 (40)</td>
<td>4 (20)</td>
<td>8 (40)</td>
</tr>
<tr>
<td>I feel that the physical layout of my pharmacy is a significant barrier preventing me from adequately counselling patients about breastfeeding issues (n=20)</td>
<td>6 (30)</td>
<td>3 (15)</td>
<td>11 (55)</td>
</tr>
<tr>
<td>I feel there needs to be more breastfeeding education produced by non-commercial sources (n=20)</td>
<td>17 (85)</td>
<td>2 (10)</td>
<td>1 (5)</td>
</tr>
<tr>
<td>Breastfeeding is enjoyable for both the mother and the child (n=20)</td>
<td>12 (60)</td>
<td>8 (40)</td>
<td>–</td>
</tr>
<tr>
<td>I am confident in my knowledge of medication use in breastfeeding (n=20)</td>
<td>15 (75)</td>
<td>1 (5)</td>
<td>4 (20)</td>
</tr>
<tr>
<td>My initial pharmacy training adequately prepared me to manage breastfeeding enquiries in the pharmacy(n=20)</td>
<td>4 (20)</td>
<td>–</td>
<td>16 (80)</td>
</tr>
<tr>
<td>There is a lack of breastfeeding education for practising pharmacists in my area (n=20)</td>
<td>15 (75)</td>
<td>2 (10)</td>
<td>3 (15)</td>
</tr>
<tr>
<td>I feel uncomfortable dealing with breastfeeding enquiries (n=20)</td>
<td>6 (30)</td>
<td>–</td>
<td>14 (70)</td>
</tr>
<tr>
<td>I could confidently advise a mother about normal infant weight gain, and would recognise if a referral to a medical practitioner was necessary (n=20)</td>
<td>11 (55)</td>
<td>2 (10)</td>
<td>7 (35)</td>
</tr>
<tr>
<td>I often talk to pregnant women about breastfeeding (n=20)</td>
<td>9 (45)</td>
<td>–</td>
<td>11 (55)</td>
</tr>
<tr>
<td>Breastfeeding issues should be dealt with by pharmacy assistants, not pharmacists (n=20)</td>
<td>2 (10)</td>
<td>1 (5)</td>
<td>17 (85)</td>
</tr>
<tr>
<td>Formula feeding is more convenient than breastfeeding (n=20)</td>
<td>6 (30)</td>
<td>3 (15)</td>
<td>11 (55)</td>
</tr>
<tr>
<td>Babies who are fed breast milk are healthier than babies fed formula (n=20)</td>
<td>9 (45)</td>
<td>5 (25)</td>
<td>6 (30)</td>
</tr>
<tr>
<td>Formula feeding is preferred if the mother is returning to work (n=20)</td>
<td>4 (20)</td>
<td>4 (20)</td>
<td>12 (60)</td>
</tr>
<tr>
<td>I would encourage a woman breastfeeding a 6-month-old child to begin weaning (n=20)</td>
<td>3 (15)</td>
<td>4 (20)</td>
<td>13 (65)</td>
</tr>
</tbody>
</table>
Nine respondents (45%) said that their pharmacy actively advertises and conducts specials on formula products, while no respondents worked in a community pharmacy with a lactation consultant or baby-care nurse facility, however three respondents clarified that they often refer customers to local lactation consultants. Eighteen respondents (90%) worked in a pharmacy that stocked breast pumps for sale or hire.

For general knowledge items, respondents scored 2.56 (SD=0.70) out of a possible 5.00. Likewise, for positive attitudes towards breastfeeding, the respondents scored 2.94 (SD=0.69) of out 5.00. The five-point scale was condensed to a table with three categories (agree [strongly agree and agree]), unsure and disagree [disagree and strongly disagree] for clarity and is presented in Table 3.

**Qualitative results from semi-structured interviews**

The interviews were conducted with a total of seven currently practising pharmacists. Six of the seven were registered pharmacists, one a provisionally registered graduate pharmacist. The pharmacists had an average of 6.5 years’ experience, with a range of 6 months to 16 years (SD=4.9). There was a relatively even distribution of parents among the cohort, with three interviewees having children of their own and all three having direct breastfeeding experience.

**Exposure to breastfeeding information during initial tertiary training**

The predominant theme stemming from these questions was that pharmacists were not adequately prepared with the depth of knowledge required for their professional practice within the pharmacy setting. All pharmacists interviewed remarked that they were not confident in their knowledge in this area upon leaving university.

> At uni? Rubbish! I don’t remember [being exposed to] anything at all!

> Minimal ... very minimal, [Infant feeding in general] was minimal, but breastfeeding specific information was a minimal part of that minimal.

**Common clinical scenarios**

All the interviewees remarked that questions about formula far outnumbered questions specifically about breastfeeding and was the most common reason for parents and caregivers to come to the pharmacy. Concerns about inadequate milk supply and questions about constipation were the most commonly encountered breastfeeding-centric questions.

All respondents expressed a lack of confidence in answering specific questions about breastfeeding in the clinical context, in turn feeling more confident about artificial baby milk products. The parents amongst the interviewees were markedly more confident in their ability to discuss and reassure patients regarding the issues raised in the clinical scenarios, which they attributed to personal experience.

> I tell them nothing cause I know nothing about it.

> I don’t know enough to say yes, keep going, or no … I’m a pushover.

> I wouldn’t be confident saying anything about breastfeeding, I don’t have resources for that the way there is for formula.

> As soon as you asked [the question] I was already thinking down the formula line, what I would do, and I felt much more confident!

**Role of the pharmacist in promoting and supporting breastfeeding**

Pharmacists expressed positive attitudes towards their role in protecting and promoting breastfeeding and awareness and disappointment in the lack of education they have in this area.

> Anyone who deals with questions from parents of infants about nutrition, if you’re selling formula you need to be protecting and promoting breastfeeding above all.

> I definitely don’t think we’re the first ones that people would come to, I mean, I do think we should probably know a little bit more, but I worry that they push breastfeeding too much.

> I definitely feel that it’s important, cause there is a huge push towards formula, I mean, it’s like right there, out there in the shop and people can see it there.

**Breastfeeding and the pharmacy business model**

The respondents acknowledged infant nutrition and breastfeeding-based enquiries as an important area of their pharmacy practice. However, some responses highlighted concerns around the lack of remuneration capacity that currently exists. This subsequently raised the issue of conflicting interests between the best practice of breastfeeding advocacy and business concerns.

> You just don’t have the knowledge, or the time, to help out people properly. It’s not enough for me to just say, ‘Well, you really should keep breastfeeding if I can’t offer them proper advice on how to deal with their problems …

> When you’re breastfeeding and you just need advice, no one would come here for that, they would think they need to talk to a nurse, and I agree with them.
Is there scope and demand, absolutely, but ... We don’t get paid for anything breastfeeding related. It might sound harsh, but we at least make some profit on a can of formula or a bottle, helping someone with an attachment issue or other breastfeeding advice takes your time away from other customers and you end up selling, what, maybe a box of breast pads or something?

Education and the impact of formula companies
Responses to direct questions about perceptions of education provision and quality demonstrated a belief that there is a lack of independent training opportunities in this area, with many pharmacists avoid training altogether for this reason.

As with any predatory capitalistic entity, these companies seek to increase their market share by curtailing and controlling the knowledge of professionals involved in that market.

DISCUSSION
Positive attitudes towards breastfeeding, less knowledge and confidence
The pharmacists included in this study had positive attitudes towards breastfeeding, scoring 2.94 out of a possible 5.00 for positive attitudes, but appeared to be slightly more lacking in basic knowledge, scoring 2.54 out of a possible 5.00. The participants in both the qualitative and quantitative sections of the research felt strongly that breastfeeding is important and respondents to the online questionnaire items were well aware of the current NHMRC guidelines on breastfeeding, with 75% correctly identifying the current guidelines from a list of several options. The interviewees were unanimous in their belief that women should seek advice before birth, with an inadequate self-perceived ability to provide that advice, with only two out of the seven describing themselves as confident in doing so, a result which is replicated in studies of general practitioners (GPs) in Australia and overseas (Brodirrib et al., 2010; Hussainy & Dermele, 2011). Most participants (80%) in the online questionnaire agreed with the statement ‘breastfeeding is an important part of my role as a pharmacist’. This sentiment was echoed in the interview responses to a similar question, which is again in line with sentiments amongst GPs. Pharmacists and GPs share frequent clinical contact in the community healthcare setting and that the results of this study are similar to findings for GPs is not surprising. It suggests that education programs could be used effectively across both professions.

Paucity and quality of pharmacist education and conflicts of interest
A significant majority (80%) of respondents to the questionnaire felt that they were not adequately prepared during their tertiary education for managing breastfeeding enquiries in the pharmacy. This was roundly supported by comments in the interviews, with all seven participants agreeing that they did not feel their exposure to breastfeeding information was adequate for their practice after university.

The responses gathered demonstrated a need for change in pharmacist education in the area of infant nutrition and breastfeeding, specifically addressing: the lack of breastfeeding education for pharmacists, the desire for less education and training to be produced by commercial sources and a perceived excessive influence of infant formula manufacturers on pharmacist education. Such concerns were echoed in the qualitative component of the study, with pharmacists identifying formula companies as vested interests and predatory component of the study, with pharmacists identifying formula companies as vested interests and predatory businesses and expressing a lack of confidence regarding the information provided by these sources. This is alarming given the high number of pharmacists who cite formula manufacturers as the most common source of information they use in consultations with customers.

Issues articulated by participants regarding the pharmacy business model point to conflicts of interest arising from the importance of formula sales to pharmacy profitability. The effects of business strategies such as discounting and sale of products such as formulae or nappies as loss leaders to attract customers into the pharmacy need to be further explored in future research.

Study limitations
The average age of ACT pharmacists is 38 years, with 65% being female (Pharmacy Board of Australia, 2013). The cohort of pharmacists included in this study was younger (mean age 34 years) and more female (75% of respondents) than the ACT average, but is broadly representative of the whole.

Our study was complicated by a poor response rate to the survey, resulting in likely self-selection by pharmacists particularly interested in this topic. Those pharmacists with more disaffected or negative attitudes towards breastfeeding may have been less likely to choose to participate. This, and the small sample, cautious against extrapolation of results from this cohort into the general pharmacist population and may overestimate the positive attitudes and knowledge of community pharmacists.

CONCLUSION AND IMPLICATIONS
This study has built on previous Australian and overseas research which has found both practical and self-reported knowledge breastfeeding to be inadequate and has shown that pharmacists are supportive of breastfeeding and keen for more education in this area.

Pharmacists are among the most accessible and trusted professionals in the Australian health care system.
Estimates are that each Australian visits a pharmacy 14 times a year (Pharmacy Guild of Australia, 2008). Our findings emphasise an inadequacy in the current education, training and confidence of pharmacists in dealing with breastfeeding enquiries. This reduces opportunities for positive business development and breastfeeding support such as advice on pumping and storing milk on return to work and referral to the National Breastfeeding Helpline. These are areas with considerable potential to promote professional pharmacy services and the capacity of pharmacists to provide credible, accurate and soundly based advice and support to parents and caregivers in their local community.

The pharmacy profession has codes of conduct and a code of ethics and is legally accountable for many such standards. Our findings raise the question of how the pharmacy profession and its professional bodies might improve awareness of appropriate ethical standards regarding breastfeeding and selling formula and related products, in line with the specific responsibilities identified for health workers and industry since the 1981 WHO International Code.

Given the incentive for pharmacies to incorporate professional consultation services into their business model, there is an important opportunity for cooperation between independent, non-profit bodies, such as the ABA and professional pharmacy organisations such as the Pharmacy Guild and the Pharmaceutical Society of Australia to position pharmacists as accessible experts in the area of breastfeeding support and referral.

REFERENCES


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