Submission no. 312
AUTHORISED: 17/4/07

Inquiry into the health benefits of breastfeeding

Committee Secretary
Inquiry into the health benefits of breastfeeding
Standing Committee on Health and Ageing
PO Box 6021 Parliament House
Canberra ACT 2600

Dear Sir,

I am a medical practitioner with a special interest in breastfeeding presently researching the breastfeeding skills and knowledge of GP registrars for a PhD through the University of Queensland, School of Medicine.

My submission focuses on the effectiveness of current measures to promote breastfeeding, primarily concerning the role of doctors in breastfeeding support. I will discuss the effect of health professionals on the initiation and duration of breastfeeding followed by the results from my yet unpublished PhD research and recommendations for the training of doctors.

Recommendations:

- On graduation medical students should have a basic understanding of:
  - the effect breastfeeding has on the health of the mother and infant;
  - the effect of breastfeeding at a community level including initiatives such as WHO International Code of Marketing of Breast-milk Substitutes, the Ten Steps to Successful Breastfeeding and the Baby Friendly Hospital Initiative, and the NHMRC Dietary Guidelines for Children and Adolescents and Infant Feeding Guidelines for Health Workers;
  - factors influencing the initiation and maintenance of lactation;
  - how an infant feeds from the breast – including positioning and attachment of the infant at the breast;
  - common breastfeeding problems such as sore nipples, mastitis and breast abscess; and
  - the use of medications in breastfeeding women.
- Education about breastfeeding should be across specialties and integrated into medical programs with both formal teaching and practical, preferably 'hands on' experience.
- The knowledge and skills learnt during the medical program should be augmented during the early years post-graduation while working within a hospital, especially while completing paediatric and obstetric terms. Role modelling by more senior doctors with an interest and expertise in the area is ideal.
- While the patient's right and ability to make decisions concerning their health management is important, medical students and GP registrars also need to recognise that suggesting or recommending a course of action to a patient is a legitimate use of their skills and knowledge.

- Within the GP vocational training program there should be ongoing training so that GPs can recognise and treat breastfeeding problems that commonly present in general practice. GPs have a responsibility to provide support and advice for breastfeeding women. It would appear that more education is needed to ensure GPs are able to use their limited time as effectively as possible.
- Breastfeeding should be discussed with pregnant women at the first antenatal visit, and at other times throughout the pregnancy to reinforce positive attitudes, provide information and offer encouragement, even if most of the breastfeeding education is conducted elsewhere.
- GPs should ask all postpartum mothers a small number of targeted questions to ascertain whether breastfeeding is progressing normally, such as the number and length of breastfeeds, the baby's urine and faecal output and whether there are nipple or breast problems.
- GPs should have a list of infant feeding referral resources to provide to women, but must have the skills to initially assess the problem.

Yours sincerely

Dr Wendy Brodribb AM, MBBS, IBCLC

Background

I am a medical practitioner with a special interest in breastfeeding. My experience includes 23 years as a breastfeeding counsellor for the Australian Breastfeeding Association (ABA), 16 years as an International Board Certified Lactation Consultant (IBCLC) and five years conducting a part-time breastfeeding medicine clinic. I was a member of the Board of Directors of the Australian Breastfeeding Association for five years, including two as president and from 2000-2006 I represented the ABA on the International Board of Lactation Consultant Examiners (IBLCE), with three years as Board Chair. I am now a member of the Board for the Academy of Breastfeeding Medicine - an international organisation for doctors with an interest in breastfeeding and lactation. I am editor of Breastfeeding Management – an Australian breastfeeding text for health professionals that is published by the Australian Breastfeeding Association. In 2000 I was recognised for my work with breastfeeding women by becoming a Member of the Order of Australia. At present I am undertaking at PhD investigating the breastfeeding skills and knowledge of GP registrars.

The extent of the health benefits of breastfeeding – or the health consequences for infants who are formula fed, have been summarised by the NHMRC(1) and the American Academy of Pediatrics.(2) Recent Australian studies indicate that breastfeeding initiation rates are high compared to many other developed countries.(3-6) It may be that measures to promote breastfeeding within the community and to a certain extent in hospitals with the Baby Friendly Hospital Initiative have been effective. However, breastfeeding rates fall quite dramatically over the next few weeks and months.(7) Without knowledgeable, consistent information from the postpartum health care community women who encounter breastfeeding problems, or are uncertain about the normal progress and process of lactation will not be given the advice, assistance and skilled help they need to continue breastfeeding.

For example, I was recently asked to see a woman who was 10 days postpartum. Breastfeeding has been progressing well, until she developed a uterine infection, and her medical provider prescribed an antibiotic that is recommended in this situation and is not contraindicated during lactation. However, the medical provider also recommended that she not breastfeed while she was taking the antibiotic. The doctor's advice resulted in the baby being given infant formula unnecessarily and the mother's milk supply declining rapidly. I see women in similar situations frequently. While the health care provider (sometimes a doctor, sometimes a nurse or midwife) is not anti-breastfeeding they often lack an understanding about the health consequences of infants being formula-fed, even in developed countries, and lack the information and skills needed to support and assist breastfeeding women and their infants.

My submission focuses on the effectiveness of current measures to promote breastfeeding, primarily concerning the role of doctors (particularly general practitioners). I will discuss the effect of health professionals on the initiation and duration of breastfeeding, followed by results from my as yet unpublished PhD research.

The effect of primary care health professionals on breastfeeding

A woman's decision to breastfeed is influenced by many factors; demographic, psychological, cultural and social and it is often difficult to tease out which, if any, is of greater importance. Additionally, mothers will not necessarily place the same emphasis on each factor. Descriptive studies report that women are more likely to begin to breastfeed and breastfeed for longer if they health professionals they come in contact with support and encourage this endeavour.

Additionally, women who report attendance at antenatal classes or receiving breastfeeding information and education either antenatally or postnatally are more likely to initiate breastfeeding. Randomised controlled trials of interventions to increase breastfeeding initiation rates, or breastfeeding rates at varying times postpartum also indicate that primary health care professionals can have a positive effect on breastfeeding initiation and duration.

The effect of support and encouragement

A number of studies have demonstrated a link between a health professional encouraging a woman to breastfeed, and the chances of her initiating breastfeeding.(8-14) In one study, 74% of mothers, who had been encouraged to do so by their doctor or a nurse, breastfed, compared to 45% of mothers who received no encouragement.(10) Similar figures were found by Lu (2001),(11) in a study where 73% of women stated that they received support for breastfeeding from the doctors or nurses they saw. After adjusting for confounding variables women who received encouragement and support were more than four times more likely to initiate breastfeeding than those who did not. This effect was even greater for groups of women predicted to have lower breastfeeding rates such as black women and single women. For example, single women were 11 times more likely to breastfeed if the medical staff supported breastfeeding. (11) Adolescent Caucasian mothers in the USA were also six times more likely to breastfeed if it was the feeding recommendation of their health care provider.(9) Socially disadvantaged African-American women intending to breastfeed were much more likely to have a doctor who thought they should breastfeed, compared to women who were intending to formula feed (42% compared to 19%).(15) More recently a study in Perth, Australia of Chinese women also reported a higher breastfeeding initiation rate if the women felt that their doctor was supportive of breastfeeding.(16)

Studies also demonstrate that a health professional's encouragement of breastfeeding affects breastfeeding duration. The Chinese women in Perth mentioned above, who had support and encouragement from their doctor, breastfed for longer with the findings being more apparent for mothers who gave birth in Australia rather than their home country (OR 16.78 vs OR 9.94). (16) Similarly in a cohort of Japanese women studied in the same city, (17) support from doctors for breastfeeding was associated with a longer breastfeeding duration. Mothers studied in the USA were also less likely to have stoped breastfeeding by 12 weeks (OR 0.56) if they were encouraged to breastfeed by a doctor, nurse of breastfeeding consultant.(18) In the same study mothers reported that breastfeeding instruction tailored to their needs was the most helpful method of breastfeeding support they received.

Doctors may hesitate to overtly support breastfeeding because they wish to appear 'non-biased' in their treatment of patients.(19, 20) In an analysis of data collected in the USA Infant Feeding Practices Survey conducted in 1993-1994,(21) only 38% of mothers reported that the doctor they saw antenatally recommended that they breastfed, with 61% reporting that their doctor did not have an infant feeding preference. Unfortunately, the positive influence on breastfeeding initiation and duration health professionals can have is only effective if there is overt support and encouragement. Neutrality is perceived by mothers as simply disguised indifference to how the baby is fed and the effects on breastfeeding initiation and duration rates is similar if there are neutral or negative views. For example women who thought their doctor supported formula feeding or did not have an opinion about infant feeding were less likely to intend to breastfeed for more than two months.(21) Similarly 74% of African-American women who were intending to formula feed either did not know their doctor's opinion about infant feeding, or thought they did not care, compared to 58% of women who intended to breastfeed.(15) Furthermore, an Australian study performed in the 1980s reported that breastfeeding rates for women whose doctors either had a

negative or neutral attitude to breastfeeding were similar and were lower than for women whose doctors actively supported breastfeeding. (22) Therefore a mother's perception of neutral or negative views about breastfeeding by her doctor can have a negative impact on breastfeeding initiation and duration.(21)

Mothers may not find the support, advice or encouragement they are seeking if their doctor has negative attitudes, or provides inconsistent, out-of-date or anecdotal information rather than evidence based advice.(23) In Victoria, Australia mothers who turned to their doctor for breastfeeding support, assistance and encouragement were less likely to be breastfeeding at 3 months (OR 0.678) than other mothers in the study.(24)

The effect of information and advice

There is evidence that women are more likely to initiate breastfeeding and continue to breastfeed if they receive breastfeeding information, advice and education either antenatally or postnatally. (8, 14, 25)Attendance at antenatal classes with a breastfeeding component increases breastfeeding initiation rates. (14, 26)Women who receive postnatal support and advice about breastfeeding while in hospital are more likely to be breastfeeding at six weeks (14) and eight weeks. (27) Breastfeeding education postpartum has also been reported to improve maternal and paternal breastfeeding knowledge with higher parental knowledge scores being associated with higher breastfeeding rates at six months postpartum.(25) Postnatal advice from obstetricians has also been shown to increase the duration of breastfeeding compared to mothers who did not have such advice. (28)

Conversely, advice from health professionals may adversely affect breastfeeding rates. It would seem that primiparous women are more likely to be influenced by the information given to them by health professionals than multiparous women with or without breastfeeding experience. In a study by Humenick and Hill (1998) the breastfeeding rate of primiparous women fell 86% in the week after they had been given negative breastfeeding advice by a health professional. There was a corresponding decrease of 31% and 30% for this group of women if the advice was positive or mixed respectively. While study participants had more contact with doctors than other group of health professionals, only 68% of doctors gave positive advice to the women, compared to 98% of lactation consultants, and 75% of nurses.

Intervention studies

A number of systematic reviews addressing interventions to increase breastfeeding initiation (29, 30) or duration (31) or both (32) have been conducted in recent years. The results of these reviews indicate that education interventions targeted at parents, particularly mothers, increases the number of women initiating breastfeeding and breastfeeding for up to three months, although there was no effect at six months. Health professional support interventions conducted antenatally or postnatally, either in person or via telephone increased breastfeeding rates at three and six months, but did not have a significant effect on breastfeeding initiation. The results of interventions including both support and education were similar to those from education alone. Written materials by themselves or in combination with education were ineffective in increasing breastfeeding initiation or duration.

One successful postnatal intervention consisted of mothers returning to a medical clinic seven to ten days postpartum, and then monthly, with breastfeeding advice being given by

obstetricians or paediatricians. This intervention showed a significant improvement in the exclusive (32% vs 67%), and any (77% vs 89%) breastfeeding rates at six months.(33)

Visiting a doctor (general practitioner or paediatrician) around two weeks postpartum increased the exclusive breastfeeding rates at four weeks (83.9% vs 71.9%), and the median breastfeeding duration (18 weeks vs 13 weeks) in a group of mothers and babies in France.(34) The doctors involved in the intervention had undertaken a five hour, two part educational activity in the month prior to the commencement of the intervention.

Ante and postnatal home visits and other interventions incorporating antenatal, in hospital, and postnatal segments also seemed to be effective in increasing breastfeeding duration.(31)

The role of the general practitioner in health promotion and breastfeeding

The Position Statement on Prevention and Health Promotion of the Royal Australian College of General Practitioners (RACGP) states:-

GPs are well placed to play a key role in both health promotion and in illness prevention....GPs see over 86% of the population in any one year, and have the potential to coordinate with other health professionals and other key agencies to achieve health promotion objectives.(35)

As breastfeeding promotes optimum nutrition in infants and improved health in infants and their mothers, GPs should be able to educate, offer support and encouragement, and provide accurate breastfeeding information to the women in their practice. The RACGP's Breastfeeding Policy recommends that GPs support and encourage exclusive breastfeeding for the first six months of life, assist new mothers to establish breastfeeding in the early postpartum period, have skills in the diagnosis and management of common breastfeeding problems and know when and where to refer more unusual difficulties.(36)

International authors (37-39) suggest that GPs play a role in helping women breastfeed from the first antenatal visit: by discussing and educating the mother-to-be about breastfeeding; addressing common concerns; anticipating problems and providing information about those problems; and referring them to other professionals as appropriate. They must feel comfortable discussing these subjects with mothers, have enough knowledge to be able to give correct information and tailor their approach to the individual.

The Australian situation

However, it would seem that Australian GPs are not equipped to fulfil this role. Recent studies examining breastfeeding duration and supports in Southern Queensland found that, although women saw their GPs about breastfeeding issues more frequently than any other health professional, the advice the GP gave was perceived as being less helpful than that provided by other professionals.(40) As mentioned previously, mothers in Victoria were less likely to be breastfeeding at three months if they consulted their GP concerning a breastfeeding issue than other mothers in the cohort.(24) Additionally, midwives in an Australian study in 2001 were reluctant to refer mothers to their GP for breastfeeding help.(41)

Unfortunately, there is very little research or information available concerning Australian doctors' training about breastfeeding, their attitude to supporting and encouraging women to breastfeed, or their level of knowledge and understanding about breastfeeding with only two

relevant papers being published in Australia in the last 15 years. Similar to research findings about primary care doctors in the USA (42-46) and Ireland,(47, 48) GPs in rural Victoria in the early 1990's had important deficits in all areas of breastfeeding knowledge.(49) However, structured education sessions increased doctors' knowledge of breastfeeding issues in the short-term in one South Australian study.(50)

My PhD research project, *Improving the breastfeeding skills and knowledge of GP registrars*, consists of a number of discrete but interrelated segments. Three of these segments are complete: a survey of the breastfeeding instruction within Australian medical schools; focus groups of medical students; and interviews with GP registrars to ascertain their knowledge, attitudes and training about breastfeeding. The fourth segment, a survey of all subsequent term GP registrars is underway at present. The final segment involves the design of an educational resource about breastfeeding specifically targeted at the GP registrars' knowledge deficits and attitudes.

The research study has ethics approval from the Behavioural and Social Sciences Ethical Review Committee from the University of Queensland. (Clearance no 2005000456).

Survey of Medical Schools

Method: During December 2005- January 2006 the ten Australian medical schools with graduates from their current programs were asked to complete an 11-item questionnaire. Data collected from the questionnaire included; if and where breastfeeding is included in the medical program; who teaches medical students about breastfeeding; and other opportunities medical students have to learn about breastfeeding.

Results: Completed questionnaires were received from nine of the 10 medical schools. This included five schools with undergraduate programs, two with graduate programs and one school with both.

Information relating to breast milk and/or breastfeeding was specifically included within the curriculum in eight of the nine medical programs. The length of formal breastfeeding instruction ranged form zero to seven hours (mean = 2.5 hours). The most commonly mentioned subject areas covered were: the advantages of breastfeeding; normal breastfeeding management; breastfeeding problems; the physiology of lactation; drugs and breastfeeding and the contraceptive effect of breastfeeding.

Most medical schools used people from a number of professional areas (range 3-5), including midwives, doctors, scientists and lactation consultants, to teach medical students about breastfeeding.

Patient contact was the most frequently mentioned teaching format but breastfeeding information was also included in didactic lectures, problem based learning (PBL), practical demonstrations, case studies, videos, home visits, student led presentations, small group discussions and online learning. A combination of formal teaching and clinical exposure occurred more frequently in the obstetric term than other specialty terms. Clinical exposure only seemed more common in paediatric and general practice terms. Most medical schools also encouraged students to see women breastfeed and discuss breastfeeding with them.

All medical schools indicated that breastfeeding is an examinable topic. The areas most commonly mentioned were the advantages of breastfeeding, physiology of lactation and breastfeeding problems.

Focus Groups of Medical Students

Method

Participants: Medical students from two regional Queensland cities, attending different universities (identified as medical school 1 and medical school 2 for this study) were invited to participate in a focus group in the city in which they were based. Only medical students in their final year of study were approached from medical school 2, while students in the last two years of study were approached from medical school 1. Both male and female students were invited and male students were specifically encouraged to attend as it was anticipated that more females than males would respond. Emails were sent to eligible students, and those interested in participating were asked to contact the researcher directly.

Materials: Semi-structured focus groups discussed the medical students' attitudes to breastfeeding and breastfeeding women; their understanding of a doctor's role with breastfeeding women; and training about breastfeeding within their medical program. Demographics including age, gender, year of medical training and whether they were parents were collected prior to the focus groups. Written consent was also obtained from all participants. The focus groups were recorded and transcribed verbatim before content analysis of each focus group was undertaken. The emergent themes and sub-themes were then compared between the two groups.

Results

Participants/demographics: In total 19 medical students participated in the focus groups – ten from medical school 1 and nine from medical school 2. The average ages of the two groups were significantly different (med school 1 26.1years, med school 2 23.3 years, $p = 0.017$ df 10.13 CI 0.62, 4.91) Sixty three percent of the participants were female – a higher percentage than present in the corresponding medical program year of training. None of the participants were parents.

Themes: Three themes emerged following analysis and a number of sub-themes were also identified.

- Attitudes about breastfeeding
  - Attitudes in general
  - Breastfeeding decisions by mothers
  - Pressure, guilt and failure
  - Gender issues
  - Attitudes to specific breastfeeding situations
  - Influences on attitudes
- Health professionals and breastfeeding women
  - Doctors' responsibilities
  - Midwives
- Breastfeeding skills and knowledge
  - Teaching in the medical program
  - Knowledge deficits

Salient points within the themes:

Attitudes about breastfeeding

- Breastfeeding is a normal, natural process that is instinctive for women, but can be difficult and painful.
- Ethical considerations balancing the mother's right to breastfeed or not, the baby's right to be breastfed and the community's right to ensure optimum health for its citizens are evident.
- Women are under pressure to breastfeed and will feel guilt and failure if they do not wish to, or are unable to breastfeed. Doctors encouraging women to breastfeed may accentuate this pressure and guilt.
- Female doctors are expected to have a greater knowledge base and better understanding of breastfeeding issues just because they are female.
- Seeing women breastfeeding in a clinical context is confronting, especially initially.
- Breastfeeding older children (> 18 months to 2 years) is disturbing, and not thought to be acceptable.

Health professionals and breastfeeding

- A doctor is expected to be able to provide accurate, evidence-based information about breastfeeding to mothers.
- Breastfeeding information may appear 'biased' because of the accumulated scientific evidence about breast and formula feeding.
- Some thought the choice between breastfeeding and formula-feeding should be seen as two equal options.
- Doctors should not let their personal positive views about breastfeeding influence their discussions with mothers and should appear to be neutral.
- Medical students lack positive medical role models for breastfeeding support and assistance.

Breastfeeding skills and knowledge

- Instruction received about breastfeeding during the medical program varied considerably between universities and between people attending the same university.
- The amount and quality of practical or hands-on experience the students received relied heavily on clinical placements, staff interest and student participation.
- The areas the students asked for more information included:
    - Contraindications to breastfeeding
    - Positioning and attachment
    - Management issues
    - Medications
    - Emergency presentations of breastfeeding problems (eg mastitis and failure to thrive)

Interviews with GP registrars

Method

Participants: Eight GP registrars who lived within 250 km of Toowoomba, Australia were recruited to participate in the study. Purposive sampling was used to recruit four male and four female participants, half of each sex being parents to children who had been breastfed and half of each sex being younger than 35 years of age. They were recruited via the Rural and Regional Queensland Consortium and through contacts of the researcher.

Materials: Semi-structured face-to-face interviews were conducted with the registrars to ascertain: their attitudes to breastfeeding and to counselling breastfeeding women in general practice, their breastfeeding knowledge and confidence, prior training about breastfeeding and

preferred learning styles and continuing education opportunities. Demographics including age, gender, years since graduation, years on the GP training program and whether they had had breastfed children of their own were also collected. Participants gave written consent after reading a participant information sheet and prior to the interview. The interview was recorded and transcribed. Participants received transcripts of the interview to verify its accuracy before analysis began.

Results

Participants/demographics: There were four male and four female participants with a mean age of 35.4 years (range 28-35). Two male and two female participants had children who had been breastfed. The years of working as a doctor varied from two to 14 (mean 7.5 years) although all were in the general practice training program (mean time in the training program1.7 FTE years). Three participants had been born and had completed their medical training overseas.

Themes: Three themes and a number of sub-themes were identified;

- Attitudes about breastfeeding
    - Attitudes in general
    - Attitudes relating to patients
    - The influences on attitudes
- Breastfeeding and general practice
    - The responsibilities of GPs
    - Practice dynamics
    - Breastfeeding problems/issues
- Breastfeeding skills and knowledge
    - Level of competence
    - Acquiring skills and knowledge

Salient points within the themes:

Attitudes about breastfeeding

- Breastfeeding is a natural part of life and the most natural way of feeding a baby.
- There was a dichotomy between stated positive attitudes to breastfeeding and actions that would convey that to a mother.
- Ambivalence and indifference to mother's feeding choices were also evident.
- Personal breastfeeding experience increased confidence.
- Men saw breastfeeding as 'women's business'. Women were thought to have greater knowledge and understanding about breastfeeding just because of their gender.

Breastfeeding and general practice

- One role of a GP was to provide evidenced-based information to mothers so they can make informed decisions.
- Most waited until after the baby was born to discuss infant feeding, even though mothers were seen antenatally.
- GPs needed to be non-judgemental and not influence the mothers' decision making process.
- GPs have a role in just 'being there' for their patients.

- Proactive questioning to assess breastfeeding was rarely done postpartum.
- Referring to an 'expert' in the field was a means of providing women with the best help available.
- Some questioned the need to know about breastfeeding as there were other people they could refer to.
- Breastfeeding problems seen in general practice included:
    - Milk supply/ infant growth/introduction of solids.
    - Mastitis.
    - Nipple problems.
    - Attachment problems.
    - Day-to-day management issues (eg. number of feeds).
    - Weaning.
    - Medications.

Breastfeeding skills and knowledge

- Many thought that their breastfeeding knowledge was inadequate.
- A lack of practical skills was of particular concern.
- Personal experience increased knowledge and was an important (or only) source of breastfeeding information.
- Some felt that they needed experience, especially personal experience, before they would be competent to assist breastfeeding women.
- Training about breastfeeding in medical school was poor – most could only remember limited formal or informal learning experiences and no hands-on or practical skills development.
- On-the-job learning after graduation did occur, but usually by distant observation and not by direct observation or hand-on experience.

Implications and recommendations

General practitioners, as the main group of primary care doctors in Australia, can play an important role in promoting breastfeeding to the women they see antenatally and during the postnatal period. They are also in an ideal position to support and advise women when breastfeeding problems arise, especially if these problems also impact on other medical issues.

Attitudes

Overall, both the medical students and GP registrars considered that they had a positive attitude to breastfeeding seeing it as the most natural way of feeding a baby. The medical students thought it was instinctive for women to breastfeed, and anticipated that they or their spouse would breastfeed if they had children. However there was a range in the strength of the conviction of the participants regarding the effects of breastfeeding.

Some medical students felt very strongly that because the consequences to the mother, her infant, the family and community as a whole of not breastfeeding were well documented, women had an ethical and moral obligation to breastfeed. They thought that women should be actively encouraged to breastfeed and only women with extenuating circumstances should consider formula feeding as a viable option for their baby.

In contrast, most medical students and registrars thought that women often had difficulty breastfeeding and that this fact needed to be taken into account when considering breastfeeding outcomes. Even though the registrars thought it was important for women to breastfeed, they only encouraged women to do so if it seemed appropriate (to the registrar) given the woman's circumstances. There was an implicit understanding that some women are more likely to wean early, and if these women were encouraged to breastfeed they may feel guilty or may feel they were coerced into breastfeeding when they were unsuccessful. Even though the registrars stated that breastfeeding was the most appropriate method of infant feeding they were not prepared to support or recommend it to everyone because they knew that some women would have significant breastfeeding difficulties.

In part, these views may relate to the medical students' and registrars' understanding of the disadvantages of formula-feeding to infants and mothers. When discussing the reasons for breastfeeding the most frequent responses given by the registrars centred on the convenience of breastfeeding and its nutritional value. Little mention was made of the increased disease burden for children who were not breastfed, and their mothers, nor the long term consequences of not being breastfed. While these issues were not specifically discussed within the focus groups both the medical students and registrars did not appear to fully appreciate the differences in outcome between breastfed and formula-feed infants. Although breastfeeding was considered to be the best, formula feeding was thought to be near enough to equivalent and thus the decision to breastfeed or not was of little consequence. Some medical students questioned whether it really mattered if mothers breastfed or not.

Others thought that mothers had the right to choose the method of infant feeding regardless of the effect on the outcome of themselves or their baby. Doctor's encouraging or advising mothers to breastfeed was seen as imposing their view about breastfeeding on the mother and was not allowing her free choice when making her decision. Some medical students thought giving any advice to patients was inappropriate - rather the patient had to make their own decision about lifestyle or treatment after being given appropriate information. As such, providing evidence-based information to mothers about breastfeeding and formula feeding was seen to be an important role of doctors by both groups of participants. Overall, they thought the information needed to be presented in an even-handed and non-judgemental manner without the opinion of the doctor about breastfeeding being evident.

Additionally, the participants may have considered that their opinion or advice would not affect the mother's decision and therefore their actions would have minimal effect. However, this has shown not to be the case. Support and encouragement about breastfeeding by doctors increases the chances of a mother initiating and continuing to breastfeed.(10, 22, 51-53) Neutral attitudes to breastfeeding by doctors are interpreted by mothers as indifference to the method of infant feeding. The effects on the rates of initiation and duration of breastfeeding are similar if there are neutral or negative views. (15, 21, 22) Therefore presenting an even-handed view of the infant feeding decisions is not necessarily in the best interests of the over 90% of mothers who intend to initiate breastfeeding. Mothers need to know if their doctor is going to provide support, assistance and encouragement during the breastfeeding period.

The participants attitudes to the rights of the baby to be breastfed verses the right of the mother not to breastfeed also affected their views on the type of information about infant feeding presented to mothers. Those that believed mothers should be able to freely choose a method of infant feeding also thought that mothers who decided to formula feed should not have to 'opt out' of breastfeeding. They thought that information about breastfeeding and formula feeding should be

presented in such a manner that it was a choice between two equal options without the information having a bias towards breastfeeding. There was, however, a strong emphasis on providing evidence based information for women. That being the case, participants noted that evidence-based information cannot show breastfeeding and formula-feeding as equal options. However, it was noted that information given to mothers had to be realistic about the problems that might arise while breastfeeding and not provide selective or contradictory information.

While attitudes to breastfeeding are important, without a sound knowledge base and an appropriate skill level doctors will not be able to assist or treat breastfeeding women adequately. The training doctors have regarding breastfeeding topics does not appear to arm them with the knowledge base and skills required.

Training

Australian medical schools with current graduates included breastfeeding instruction within the curriculum. The method and length of instruction and subject areas covered varied considerably. Breastfeeding information was taught across specialty areas and by people from varying professions emphasising its multi-specialty, multi-discipline and multi-system nature.

From the medical student's point of view the amount and type of formal breastfeeding instruction during the medical programs varied as did the availability of practical hands-on experience. Even between members of the same focus group the breastfeeding instruction and practical experience they encountered was inconsistent and patchy at best depending heavily on clinical placements, staff availability and interest. The two medical students (one from each focus group) who attended a session at a lactation clinic under the supervision of a lactation consultant found the experience to be very beneficial, enabling them to see first hand how a baby feeds at the breast and how attachment can be facilitated. This experience and the information obtained at the clinic were not replicated in other aspects of the medical training and other students admitted that they missed an important learning opportunity.

GP registrars also mentioned that hands-on instruction and opportunities to learn practical skills during their medical program, or post graduation were very limited although it was seen as a vital aspect of their training to become competent practitioners. Their experiences of more formal theoretical breastfeeding education was also minimal and appeared to concentrate on basic anatomy, physiology and the advantages of breastfeeding in preference to practical breastfeeding concerns that mothers present with. The three GP registrars who completed their medical training overseas had similar experiences to the Australian graduates, with little formal breastfeeding instruction. Furthermore, a recent paper discussing breastfeeding educational requirements of health practitioners, including doctors, argues that breastfeeding education is often given a low priority within undergraduate programs across health disciplines.(54) It is therefore not surprising that many of the GP registrars interviewed commented that they thought that their breastfeeding training was inadequate.

However, doctors with personal or spousal breastfeeding experience are often more knowledgeable concerning breastfeeding topics and are more confident when confronted with a breastfeeding problem.(43, 55, 56) This type of experience is thought to be an important source of breastfeeding knowledge and skills when other avenues of instruction are inadequate.(57)

The registrars in this study who had personal or spousal breastfeeding experience commented that their experiences were an important source of breastfeeding knowledge and skills, much more so

than any formal learning or training activity. In particular they thought that personal experience provided them with practical hands-on skills that were absent from their medical program, and not sufficiently covered during postgraduate vocational training. Furthermore, the registrars with no personal experience, particularly the male registrars without children, believed that they were at a disadvantage when discussing breastfeeding with women. The over-riding view was that there needed to be a degree of experience, either personal (or spousal) or professional, before any doctor would be proficient assisting breastfeeding women. However, as the average age of first time mothers increases (58) the number of registrars without personal breastfeeding experience will also increase and the opportunities for them to incorporate knowledge gained from personal experience into their day-to-day practice will decrease. Additionally there is no guarantee that personal breastfeeding experience will positively affect a doctor's ability to assist breastfeeding women. If they (or their spouse) had been unable to breastfeed or weaned early because of difficulties, the attitudes and information they convey to mothers may have an adverse affect on that woman's ability to breastfeed successfully. Personal experience cannot and should not be relied upon to provide GP registrars with necessary knowledge and skills. Other professional experience is necessary to ensure competent practice.

All GP registrars will have completed at least 2 years within a hospital post-graduation including a paediatric term and many will have also completed an obstetric and gynaecology term. Both would seem appropriate times for further breastfeeding instruction. However, while all the registrars interviewed had worked in hospitals for a number of years post-graduation and had undertaken obstetric and gynaecology and paediatric terms, they did not have an opportunity to learn about breastfeeding first-hand. The culture within the hospital led the registrars to believe that breastfeeding was the domain of the midwives, and assisting breastfeeding women was not a doctor's role. This was evident by the lack of involvement with breastfeeding issues by doctors at specialist or registrar level. Additionally, midwives did not encourage junior doctors to take an interest in assessing and managing women with breastfeeding difficulties. The registrars mentioned instances where they were called upon as interns or residents to write a prescription for a woman with a breastfeeding problem (such as mastitis), yet they were not given any information about the woman's further management, or reasons why the problem occurred. Time constraints were also evident. After completing the essential paperwork and routine administrative and clinical tasks there was no time to learn about breastfeeding techniques or management. Some registrars mentioned seeing women breastfeeding soon after delivery and recognised that this was an important strategy to encourage breastfeeding, but had little understanding of the underlying reasons, or how to help the mother and baby at this time. Teaching junior doctors specifically about breastfeeding was not seen as important or even useful.

Recommendations:

- On graduation medical students should have a basic understanding of:
    - the effect breastfeeding has on the health of the mother and infant;
    - the effect of breastfeeding at a community level including initiatives such as WHO International Code of Marketing of Breast-milk Substitutes, the Ten Steps to Successful Breastfeeding and the Baby Friendly Hospital Initiative, and the NHMRC Dietary Guidelines for Children and Adolescents and Infant Feeding Guidelines for Health Workers;
    - factors influencing the initiation and maintenance of lactation;

- how an infant feeds from the breast – including positioning and attachment of the infant at the breast;
- common breastfeeding problems such as sore nipples, mastitis and breast abscess; and
- the use of medications in breastfeeding women.

- Education about breastfeeding should be across specialties and integrated into medical programs with both formal teaching and practical, preferably 'hands on' experience.
- The knowledge and skills learnt during the medical program should be augmented during the early years post-graduation while working within a hospital, especially while completing paediatric and obstetric terms. Role modelling by more senior doctors with an interest and expertise in the area is ideal.
- While the patient's right and ability to make decisions concerning their health management is important, medical students and GP registrars also need to recognise that suggesting or recommending a course of action to a patient is a legitimate use of their skills and knowledge.
- Within the GP vocational training program there should be ongoing training so that GPs can recognise and treat breastfeeding problems that commonly present in general practice. GPs have a responsibility to provide support and advice for breastfeeding women. It would appear that more education is needed to ensure GPs are able to use their limited time as effectively as possible.
- Breastfeeding should be discussed with pregnant women at the first antenatal visit, and at other times throughout the pregnancy to reinforce positive attitudes, provide information and offer encouragement, even if most of the breastfeeding education is conducted elsewhere.
- GPs should ask all postpartum mothers a small number of targeted questions to ascertain whether breastfeeding is progressing normally, such as the number and length of breastfeeds, the baby's urine and faecal output and whether there are nipple or breast problems.
- GPs should have a list of infant feeding referral resources to provide to women, but must have the skills to initially assess the problem.(20)

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