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Dear Committee Chair,

My name is Karleen Gribble and I am an adjunct research fellow in the School of Nursing at the University of Western Sydney. My research interests include: long term breastfeeding, relactation and adoptive breastfeeding, the non-nutritional impact of breastfeeding on mother and child, the influence of socio-cultural factors on infant feeding practices, children's knowledge of infant feeding, and infant feeding in emergencies. I would like to thank the committee for initiating this inquiry. I think that we are at a critical point in Australia with regards breastfeeding promotion and the recommendations of this inquiry will have a long term impact on the well being of Australian mothers and babies and on the viability of health systems across the country.

Importance of breastfeeding

I would like to begin my submission with a discussion about language. I think that how we talk about infant feeding is extremely important, important to how we understand the current situation with regards breastfeeding and whether increasing breastfeeding rates is viewed as something that would be nice to have or something that we cannot afford to do without.

I note that the terms of reference of the inquiry state that the committee wishes to consider the extent of the health benefits of breastfeeding. For many years breastfeeding promotion has focussed on describing the "benefits of breastfeeding" but this is changing and a consideration of the recent history of infant feeding will explain why. During the early-to-mid 20th century the marketing of infant formulae and a belief that science was supreme led to the acceptance of infant formula as generally superior to breastmilk. Breastfeeding declined to an extent such that few babies in the Western world were breastfed for very long and bottle feeding became the normal way to feed babies. Breastfeeding initiation rates in Australia fell to as low as 55% (Manderson 1985). When health authorities recognised that the use of infant formula was costly in terms of infant health they dealt with it by promoting the "benefits of breastfeeding" over the accepted practice of bottle feeding and talking about breastfeeding as "best". However, it is now increasing being considered that describing the "benefits of breastfeeding" or referring to breastfeeding as "best" for babies does not assist parents to understand the importance of breastfeeding or the risks associated with premature weaning from breastfeeding. Research has shown that there is a lack of recognition that breastfed babies being healthier than babies who are fed infant formula also means that babies who are fed infant formula are sicker than breastfed babies (ie there is no recognition of any risk associated with infant formula) (Hannan, Li et al. 2005). I would refer the committee to a paper written by a colleague and myself on this subject (attached to this submission). When considering what action you recommend the government take with regards breastfeeding, the way in which you consider the issues may be important. For instance will you consider that increasing breastfeeding rates provides the opportunity to save money in reduced health care costs or will you consider that the high frequency of infant formula use in Australia is resulting in increased illness in society and

is placing an expensive and unnecessary burden on the health care system, on families and on the economy.

I think it is worth the committee considering whether the current high use of infant formula is sustainable and whether it is in the public's interest to have negligible regulation of the marketing and sale of infant formula. Can our health system afford to be treating illness that is "commerciogenic" in origin such as that associated with the unnecessary use of infant formula? As someone with an awareness of the importance of breastfeeding, it is difficult to watch the government fund health initiatives that would be largely redundant if women were adequately supported to breastfeed their babies. For example, I have heard that the government is planning to fund universal vaccination of babies against a single rotavirus strain at the cost of tens of millions of dollars each year. As it was reported in the Sydney Morning Herald recently *"Rotavirus puts 10,000 Australian children in hospital each year, with many more turning up at hospital emergency wards and at doctors' surgeries with symptoms of acute diarrhoea and vomiting...it would cost the Government $25 million to $28 million a year to fund [universal rotavirus vaccination] ...the vaccine would save the health-care industry up to $30 million a year in the cost of treating the virus." On average 27 children are admitted to hospital with rotavirus each day and even more in winter...It's a problem which has placed significant strain on hospitals. Some wards are being closed and elective surgery cancelled because of it."* http://www.smh.com.au/news/national/call-for-rotavirus-vaccine-funding/2007/02/20/1171733763720.html. However, much of this acute illness is a result of premature weaning from breastfeeding or non-exclusive breastfeeding and such vaccination would be for the most part, unnecessary if babies were breastfed according to health recommendations. Children who are not breastfed have been found to be three times more likely to contract rotavirus infection as compared to children wh are breastfed (Gianino, Mastretta et al. 2002) and many breastfed babies who are infected show no signs of illness (Duffy, Byers et al. 1986; Gianino, Mastretta et al. 2002). Thus, one study found that babies who were not breastfed had an 800% increased risk of being sick enough with rotavirus to require a doctors visit as compared to babies who were breastfed (Sethi et al., 2001). Further, a recent study looking at hospitalisation of infants found that babies who were not breastfed were nearly five times more likely to be hospitalised for gastroenteritis (and also respiratory illness)(Paricio Talayero, Lizan-Garcia et al. 2006). Thus, *serious* illness due to gastroenteritis of the type that needs expensive medical treatment is largely preventable by breastfeeding. Since breastfeeding is also protective against many other illness it makes economic sense to place resources into breastfeeding promotion to reduce the need for expensive medical intervention *before* considering interventions such as universal immunisation which is expensive and only impacts one source of illness. The proposed rotavirus vaccine might cost $30 million a year, imagine how far this sort of funding would go towards supporting mothers to breastfeed their babies according to health recommendations, preventing a whole variety of illnesses, not just a single strain of a virus that causes one illness.

Marketing of infant formula and bottle feeding

I shall spend a bit of time talking about the marketing of infant formula and bottle feeding because I believe that the current situation with regards the marketing of these products/practices is contributing to the poor breastfeeding rates we have in Australia. In order for mothers to be able to successfully breastfeed their babies breastfeeding must be *protected*, *promoted* and *supported*. Without protection of breastfeeding from the persuasive and unethical marketing of infant formula and bottles/teats (bankrolled by companies with huge advertising budgets) efforts to promote and support breastfeeding may be annulled. I believe that it is crucial that the Committee consider how lack of protection of the population from unethical marketing is adversely affected breastfeeding in Australia.

The International Code for the Marketing of Breastmilk Substitutes (International Code) was instituted in 1981 with Australia as one of the signatories. It was necessary because the marketing practices of infant formula companies were having a negative impact on breastfeeding rates and child health. This was particularly so in the developing world where the prerequisites for the use of infant formula (sufficient income to buy the product, clean water, ability to clean feeding implements and a functioning health system) did not exist and infant mortality rates were increasing at an alarming rate as a result of increasing use of infant formula (Palmer 1988, I would recommend this book to members of the committee who wish to understand the history of the marketing of infant formula). The International Code prohibited the direct marketing of breastmilk substitutes (including infant, follow on and toddler formulas) and bottles/teats to parents and it also restricted the information provided to health professionals by manufacturers to that which is scientific and factual in nature. The International Code constitutes a *minimum* standard of acceptable behaviour and as a signatory to the resolution Australia was obliged to enshrine the code in law. It is important to note that prior to the development of the International Code, Industry had instituted their own code which had failed dismally (Palmer 1988).

However, Australia has not placed the International Code into legislation. Rather, we have a voluntary industry agreement, the Marketing in Australia of Infant Formula agreement (MAIF). MAIF does not apply to bottle/teat manufacturers, it does not apply to all infant formula manufacturers, it does not apply to retailers in any way and there is no penalty associated with breaching the agreement or compulsion to be a party to the agreement. This means that the unethical marketing of infant formula and bottles/teats is common in Australia and unfortunately, (I believe) that problematic marketing is increasing in prevalence and effectiveness.

The body that administers the MAIF agreement is the Advisory Panel on the Marketing in Australia of Infant Formula (APMAIF). I have sent numerous complaints to APMAIF in the last 18 months and it is my opinion that MAIF has been entirely ineffective in preventing the proliferation of misleading and unethical marketing that has occurred in recent times. For example, in 2005 Bayer launched a new infant formula, the Novolac range. Advertising of Novolac appeared in parenting magazines, parenting websites and in chemists. Novolac promised to solve "feeding problems" such as a baby being hungry and growing and waking at night (ie it pathologised normal infant behaviour). Novolac's marketing campaign is particularly noxious because it preys on parent's concerns about their babies and it turns these concerns into illnesses that can be treated by their products. Novolac marketing also promises parents more sleep (advertising associated Novolac with lights going off in homes indicating that their products make babies sleep more). Novolac uses a similar approach in their marketing to health professionals. One marketing tool showed houses at night with all their lights on (and the slogan *"Put feeding problems to bed"*) and when a tab was pulled out the lights on the house went out and the Novolac range of formulas was shown (although this gimmick was targeted at health professionals it was accessible to parents in many pharmacies). Novolac also marketed to health professionals in professional journals (such as Australian Family Physician) and in booklets citing a study called the "Eden Survey" as evidence for the efficacy of Novolac in solving "feeding problems." Provision of scientific and factual information to health professionals is supposed to include appropriate referencing of any claim, however, despite university libraries searching for this study it has proved impossible to locate it. A request to Bayer for the study has also been unfruitful. I am beginning to wonder if the research exists. Again, the Novolac feeding guide is accessible to many parents in their local chemist.

Many complaints were made to APMAIF about Bayer's unethical marketing and it was recognised that such marketing would have breached MAIF if it had applied, however, the MAIF agreement does not apply to companies who are not signatories to the agreement and Bayer is not a signatory.

According to APMAIF, Bayer was aware of MAIF prior to the launch of Novolac but there was no compulsion to become a signatory and so they did not join. Apparently they now intend to become party to MAIF however, the damage is already done. Bayer is only one of many infant formula manufacturers to which MAIF does not apply including: Holle; Bellamy's (an Australian company that has received federal government funding), Babynat and a variety of store branded infant formulas sold by chemists including Blooms, Amcal and Soul Pattinson. These store branded infant formulas are often marketed with volume incentives such as buy nine tins get the tenth free or spend $20 and buy a tin of formula for 20c. These incentives breach the International Code but not MAIF because, apart from not being signatories to MAIF, the marketing of these store brand infant formulas is determined to be "retailer activity" and therefore not covered by MAIF.

The fact that MAIF does not apply to retailers is a large flaw in the agreement because this is where the public purchase their product and it is the interface between the product and the consumer where advertising is most effective. This means that manufacturers are free to market their product via retail outlets. Thus, "Specials" advertising for infant formula appears in families' letterboxes on an almost daily basis and promotions face them each time they go to a supermarket or chemist. In 2006, advertising of infant formula appeared on television as part of a Coles advertising campaign. This particular "special" had Wyeth S26 infant formula at one third off the normal price and had expectant mothers buying before their baby was even born in case they needed it. Such marketing is driven and paid for by the manufacturers and it is absurd that MAIF ignores this.

MAIF also relies on members of the public making complaints, which means that a mother who is given samples of infant formula by her child health nurse "to help her out" or a workplace colleague of such a nurse is expected to make a complaint. This of course, rarely happens. It is a time consuming process to make complaints to APMAIF and since nearly all marketing either falls outside the scope of MAIF or is found to be not in breach of the agreement it is very discouraging for those who do complain.

The labelling of infant formula is often misleading as manufacturers seek to present their products as something that caring parents would want to give their babies. For example, Nutricia's starter formula labelling states, "*Karicare Gold Plus is nutritionally complete...it has a unique formulation of special ingredients...these nutritionally support your baby's digestive and natural immune systems...Karicare Gold Plus also has ingredients which assist baby's eye, brain and nerve development.*" Such outrageous descriptions make infant formula sound like a health food. The use of infant formula, regardless of the ingredients, results in increased illness in babies and retards cognitive, eye and immune system development (Simmer 2001; Mortensen, Michaelsen et al. 2002; Jackson and Nazar 2006; Singhal, Morley et al. 2007) the exact opposite of what is claimed on the label. Infant formula labelling will note that "incorrect preparation can make your baby very ill" but nowhere is it stated that even with correct preparation use of this product may result in serious illness. It is therefore not surprising that mothers see no reason not to use infant formula. If parents do not see that there are any disadvantages or risks to using infant formula why would they not use it. Nutricia has also just started "boxing" their infant formula and the link between use of the formula and good health as described on this box is even more explicit than the labelling. As one person said when I showed them this box, "Why wouldn't you give this to your baby? They make it sound like you'd be irresponsible if you didn't."

Mothers are also mislead by salespeople. On a recent visit to my local Chemist I overhead a young mum talking to the sales assistant. This mother asked for assistance in choosing a formula to use when she returned to work part-time. The assistant brought her over to the range of infant formula and said that she would explain the differences between the formulas. The assistant said, "these "gold" formulas contain the same ingredients as are in breastmilk." This mother was also assisted in

her choice of infant formula by the pharmacist but at no time was medical advice provided, there was no exploration of the mother's need for this product, whether the use of infant formula could be avoided or the desirability of minimising the use of the infant formula so as to minimise the negative health affects on the baby. I imagine that the sort of assistance that this mother was provided with is quite common. Infant formula (and indeed bottle and teat manufacturers) in Australia have sought to market their products as functionally like breastfeeding (the method of feeding endorsed as "best" by all) and as being "good enough" to be viewed as salient (ie desirable). Research has found that in the last five years there was a 10% increase in the proportion of Americans who believe that infant formula is as good as breastmilk to 25% (Li, Rock et al. 2007) and this was linked to a large increase in investment by industry in marketing and in particular, the marketing associated with the addition of long-chain polyunsaturated fatty acids to some infant formulas. There is no research to elucidate what has happened in Australia, but I think that it is quite likely that if such research were carried out it would demonstrate a similar trend and that an increasing proportion of Australians would think that infant formula is comparable/or of equal quality to breastmilk.

Infant formula and bottle/teat manufacturers seek to associate themselves with health professionals and organisations associated with health. Thus, companies actively seek sponsorship of conferences and meetings where health professionals will be present. These companies are profusely thanked by conference organisers (usually senior or respected members of the health care profession) and in this way endorsement of the company and their products is implied. Such conferences are also used by companies to gather the contact details of attendees via competitions so that they may follow up with them at a later date (some health services no longer allow infant formula sales people to directly interact with some frontline health providers and so this is an important way of initiating and continuing contact with health professionals). Conferences also facilitate infant formula and bottle/teat manufacturers giving gifts to health professionals. They may also sponsor the attendance of individual health professionals to conferences and pay for health professional education. Sometimes health services collaborate with infant formula manufacturers in this process. For instance, the August 2006 continuing education conference for maternal and child health nurses employed by the Victorian Department of Human Services was sponsored by Wyeth Nutrition and called the "Wyeth Maternal and Child Health Conference." The promotional material made this conference appear to be a Wyeth conference when in fact it was a Department of Human Services conference sponsored by Wyeth. Such arrangements are clearly a conflict of interest.

Unfortunately, sponsorship of conferences related to infants and young children by infant formula and bottle/teat manufacturers is very common. I have spoken at a number of conferences sponsored by infant formula and bottle/teat manufacturers that are known breachers of the International Code in Australia and elsewhere. In such circumstances I have found it necessary to give a disclaimer so that it is not implied that I approve of the unethical marketing of these companies. However, the presence of respected researchers and clinicians at industry sponsored conferences is sometimes used as a tool to market companies to health professionals.

Health professionals in hospitals and other service centres are also invited by hospital sales people to meetings run by infant formula manufacturers where meals and alcohol are served, a sales pitch provided and gifts given. The feting of health professionals by infant formula manufacturers is a method of recruiting health professionals as agents. This is important to infant formula manufacturers because health professionals are in the position to recommend infant formulas to parents and parents rely upon their advice. A sales manual from one infant formula manufacturer (no longer operating in Australia) said, *"Never underestimate the role of nurses. If they are sold and serviced properly, they can be strong allies. A nurse who supports Ross is like an extra salesperson"* (this manual was provided as evidence in a US court case, 907 S.W.2d 503, 515 (Tex.

2004)). Educational materials provided to health professionals are often a mix of scientific information and marketing spin. References to support claims are often difficult to obtain (and it is therefore difficult to check the veracity of claims). Even where this information is factually correct, clever arrangement of facts, slogans, diagrams and photographs can create an impression that is misleading. I have included with this submission a poster by Wyeth that I believe is a good example of this. I believe that this poster was intended for health professionals (although I found it on display in a chemist). This poster is particularly clever for while the written material is factually correct the erroneous impression is created that the infant formula displayed assists in brain development. Such marketing and associated gift giving can be very effective in marketing products.

When I hear from a parent that their doctor or child health nurse recommended a particular formula as "closest to breastmilk" (as I regularly do) I know that this health professional has been "won" by a salesperson from that company. Research has consistently shown that the giving of a gift (no matter how small) predisposes an individual to look with approval upon the giver, creates a sense of obligation towards the giver and impacts behaviour (Katz, Caplan et al. 2003). Note that the NHMRC recommends that parents who need to use an infant formula should choose on the basis of price (the required ingredients of all infant formulas being mandated under an evidence based system)(National Health and Medical Research Council 2003). Health professionals are also provided with gifts that are intended to be used in the course of his or her work and so assist in marketing the product, not just to the health professional but also to parents. Gifts I have personally observed include diaries, note pads, infant length and child height measurers, head tape measurers, pens, mugs, clocks, calendars and calculators. Such gifts will display the company name, often a product name and logo or slogan and they not only foster obligation on behalf of the health professional but imply endorsement of the product to parents. Such use of the health system to market product is allowed under the MAIF agreement however, I do not believe that this is acceptable.

I am also concerned about the number of reports I have heard of parents being given samples of infant formula either direct from the manufacturer or from a health professional. The infant formula manufacturers deny that this is happening however one manufacturer (Wyeth) actually directs parents to request samples from health professionals via their website (https://www.wyethnutrition.com.au/na_contact_us.asp?menu_id=7&menu_item_id=1) and I have in my possession a formula sample order form given to me by a health professional who was given it by a Wyeth salesperson. Nutricia will send parents samples of infant formula if they contact their telephone based advisory service and ask for samples (samples are sent to the local chemist for pickup).

Infant formula manufacturers have also set up their own "independent" infant nutrition organisations such as the "Victorian Infant Feeding Advisory Group" (VINAG). VINAG membership includes high profile Victorian health professionals and is funded by Wyeth Nutrition. VINAG produced a brochure and print advertising on the subject of hypoallergenic infant formula that could be viewed as marketing infant formula to breastfeeding women. VINAG also produced a brochure on the correct way to prepare infant formula; the brochure begins with the misleading phrase "Infant formula can supply all the nutrients your little one needs for normal, healthy growth." Advertising by VINAG appeared in magazines targeted at parents and the brochures were distributed across Australia by Wyeth salespeople. APMAIF considers that such arrangements are acceptable under MAIF.

Some health professionals may maintain that such association with infant formula manufacturers does not imply endorsement or acceptability of the product produced by such companies or the way

in which companies carry out their business. However, if the same health professionals were offer sponsorship or gifts by a tobacco or alcohol manufacturer they would refuse them because they would not wish to be professionally associated with products that negatively impact health. Why do some health professionals not feel the same way about infant formula manufacturers? One factor that makes it difficult for health professionals to cease association with infant formula manufacturers is the huge amount of money that is on offer. I was recently speaking with a health professional involved in organising continuing education for child health nurses. Her organisation did not find it acceptable to accept funding from infant formula manufacturers yet she was inundated with offers from infant formula manufacturers who wished to give large amounts of money to sponsor the meeting. It is very difficult to reject such sponsorship. I think that the long history of the involvement of the medical profession in the development and marketing of infant formula is also involved and makes it difficult for many health professionals to understand the negative impact of infant formula upon child and maternal health. However, given the overwhelming (and continually growing) evidence of the harm caused by the unnecessary use of infant formula this is no longer acceptable.

The entry of toddler formulas for children one year and older onto the Australian market has provided an opportunity for infant formula manufacturers to aggressively market their products to parents. Despite the fact that the NHMRC and WHO recommend that children who are one year of age should still be breastfeeding, these products are not covered by MAIF and so may be advertised and marketed with no semblance of restraint. Samples of toddler formula are widely distributed in chemists, via advertising on websites and magazines, at baby fairs and in magazines (last week I was given a sample of toddler formula attached to a free parenting magazine with a distribution of 280 000). Toddler formula is advertised on television. One advertisement (for Karicare Toddler Gold) is particularly misleading because it suggests that the formula is not a dairy product but might even be human milk. This advertisement was banned in New Zealand and was awarded the "Smoke and Mirrors" award for misleading advertising by the advocacy group the Parents' Jury. Complaints were also made to the Australian Advertising Standards Bureau and APMAIF but both found the complaints outside of their jurisdiction. .

Toddler formulas are marketed as a health food most particularly as a "brain food" because of the addition of long chain polyunsaturated fatty acids as ingredients. Marketing exploits parents aspirations for their children thus one advertisement shows a little girl playing with a stethoscope with the words "Emily Jackson, Doctor," "Karicare Toddler Gold, helps toddlers reach their full potential." The inference is obvious, if you want your child to achieve academically you should use this product. Again, this is misleading.

Toddler formula marketing is also used to cross market infant formulas which are almost identically packaged to infant formulas. However, this is more than just promotion of brand recognition there is also a powerful way of promoting infant formula by promoting ingredients that are present in both toddler and infant formulas. Advertising highlights the "special ingredients" that are in the toddler formula, often providing quite some detail about why that ingredient is good for children's health. These special ingredients often have their own logo and parents are directed to take note of the logo and look for it in the baby aisle in the supermarket. This logo is then prominently displayed on the infant formula tin as well as the toddler formula. In this way, the impression is created that infant formula is good for babies. An example of such cross marketing is advertising of the Nestle Toddler Gold formula, *"Parents don't need a degree in medical science to appreciate the role that probiotics can play in their little one's diet today. All they do need to know is that certain products are now fortified with good bacteria such as bifidobacteria- so it's worth looking out for the Bifidus BL sun symbol on Nestle products in the baby aisle of your local supermarket or pharmacy."* Thus, parents are told how good Bifidus BL is for their children, it is promoted as a health food. They are

shown the Bifidus BL logo and told to look for it in products that only Nestle sells and directed to retail outlets and the Nestle website where they will find the infant formulas that Nestle produces with the prominent BL sun logo. The heavy promotion of Bifidus BL in Nestle Toddler Gold formula advertising and the associated prominence of the BL logo on Nestle infant formulas cross markets to the almost identically packaged Nestle infant formulas. Such cross marketing has been found to be acceptable by APMAIF.

Infant formula manufacturers are heavily involved in the production of educational materials for parents. Such "educational materials" cite the endorsement of health professionals associated with well known institutions such as universities or health services in order to provide credibility with parents who might read these materials (one infant formula manufacturer states this explicitly; "all the information is reviewed by health professionals so you can be sure it's sound advice"). However, the content of such material is often very poor and designed to maximise the perceived difficulty of breastfeeding and the ease of bottle feeding. The risks associated with the use of infant formula are never mentioned but infant formula is consistently compared to breastmilk with the impression being created that the differences between infant formula and breast milk are so small as to be insignificant. It seems that MAIF does not require such marketing/educational materials to provide accurate information and it is therefore acceptable for false and misleading to be provided to parents in such materials. Images of healthy and happy mothers and babies are associated with formula feeding in these educational materials.

Infant formula manufacturers strive to also associate themselves with good health in their educational materials. Thus, Nestle produces brochures on "Food Allergy Prevention," "Immune System Health: " and the "Long Term Impact of Early Nutrition on Health: shaping your baby's future health." Is it any wonder that parents are unaware that there are significant health risks associated with the use of infant formula, that there are higher rates of allergy in babies fed infant formula (Oddy, Peat et al. 2002), that infant formula retards the development of the immune system (Labbok, Clark et al. 2004), and that the long term impact of formula feeding on later health may include for instance an increased risk of high blood pressure and heart disease (Owen, Whincup et al. 2003).

Bottle and teat manufacturers also seek to promote their products in misleading ways. For instance, one manufacturer places the use of a bottle as part of a natural progression in learning for infants, something that all babies need to learn to use. Teat manufacturers claims that their teat is "closest to breastfeeding" or will "help you to breastfeed for longer." Solving problems such as colic are also promised with one manufacturer's slogan being "We've found a way to bottle happiness." Note that the scientific evidence is that whatever teat is used bottle feeding the sucking action in breast and bottle feeding are completely different (Medoff-Cooper and Ray 1995; Righard 1998; Page 2001; Mizuno and Ueda 2006) and there is research that the use of a bottle may interfere with breastfeeding and shorten breastfeeding duration. The deleterious impact of bottles and teats on orofacial development is not mentioned in these marketing materials (Page 2001) but some claim that their product is "orthodontic."

Infant formula manufacturers also seek to sponsor the production of educational materials by health services. For example, a publication,"Foods for Baby's First Year," was produced by the Nutrition section of the Royal Children's Hospital, Melbourne but printed with sponsorship by Nestle. The placement of the Nestle logo in a prominent position implies the endorsement of Nestle products by the Royal Children's Hospital. Interestingly, this publication, which is widely distributed in Australia (including by Nestle salespeople), presents breast milk and infant formula as equivalent recommendations for infant nutrition and so normalises bottle feeding.

Infant formula manufacturers seek to market themselves to the public as "infant feeding" experts, not as just formula feeding experts but also breastfeeding experts. In the past, infant formula manufacturers employed "milk nurses," formula salespeople who worked in clinics providing infant feeding advice. These nurses were sometimes qualified nurses however, their job was always to market infant formula to mothers. It was the activities of such milk nurses that led to the prohibition in the International Code of infant formula salespeople seeking contact with parents. We no longer have these old style milk nurses however, some infant formula manufacturers are heavily promoting telephone-based advisory services which employ qualified health professionals and claim to provide professional and peer support in all areas of infant feeding including breastfeeding (eg "Another fantastic resource for you is the Wyeth Nutrition Careline. When you call the Careline, you can speak with friendly professionals including a dietician, a lactation consultant and of course, experienced mums"). These telephone-based advisory services are promoted via "educational brochures" and fridge magnets that are distributed in chemists and some health services (such as early childhood clinics), on promotional stands (often prominently placed in the doorways of chemists) and on tins of infant formula. Some manufacturers have also set up "Mums' Clubs" or online parent support communities as part of their marketing strategy.

The labelling of complementary food is also an issue. It is recommended that children be introduced to solid food at around six months of age. However, baby foods including not only solid foods but juices and teas are often labelled as "suitable from four months" (and last week I saw a baby tea labelled as "suitable from two weeks"). This is confusing to parents and no doubt it results in the termination of exclusive breastfeeding, and associated increases in illness, in some cases. Labelling of infant food should be required to reflect health recommendations. I am aware that Food Standards Australia New Zealand have discussed this issue but it is time that something was done about it.

As you can see infant formula and bottles/teats are actively and aggressively marketed to parents and health professionals in Australia in spite of MAIF. Industry self regulation has failed. I believe that in order to protect parents from the unethical marketing of infant formula and bottles/teats we require legislation that prohibits such activity and applies to all manufacturers and retailers (such legislation may need to be different in some ways from the International Code to take into account the changes in practice in the 25 years since the development of the Code). In addition, the Australian Competition and Consumer Commission should make it a priority to investigate deceptive labelling and advertising of infant formula, bottles and teats (I am aware that complaints have been made to ACCC about a number os instances of misleading or deceptive marketing however, they have not considered these important enough to investigate). I would suggest that entities who have a commercial interest in women weaning from breastfeeding should not be involved in the education of parents or health professionals about infant feeding in any way. I would note, however, that if conference and continuing education sponsorship by infant formula and bottle/teat manufacturers is removed that it will need to be replaced by funding from elsewhere, at least in the short term.

Informed choice

I think that we need to come to the stage where we provide parents with the opportunity to make informed choices about infant feeding. One would not think that this would be a controversial thing to suggest (after all we have determined that in other areas of health individuals have a *right* to informed choice) however, whenever this issue is brought up in relation to breastfeeding and the use of infant formula it becomes clear that many wish to prevent informed choice.

In theory informed choice is presented as desirable. Thus, the aim of MAIF is "to contribute to the provision of safe and *adequate* nutrition for infants, by the protection and promotion of breastfeeding and by ensuring the proper use of breast milk substitutes, when they are necessary on the basis of adequate information and through appropriate marketing and distribution." and it is stated that "for the purposes of the Aim, 'necessary' includes mothers who make an informed choice to use breast milk substitutes." Are parents able to make informed decisions about infant feeding without being provided with information about the risks associated with the use of infant formula? I would argue that they are not. However, MAIF does not ensure that parents are being provided with the information they need to make informed choices about infant feeding nor does it protect them from the misleading and deceptive marketing of infant formula. Further, if providing parents with information to enable them to make informed choices is proposed, I would suggest that infant formula manufacturers will seek to prevent this from happening maintaining that it is not appropriate to talk about the risks of using infant formula. The International Infant Formula Council (whose membership includes manufacturers who distribute in Australia such as Wyeth and Nestle) seek to refute that the use of infant formula harms the health of mothers and babies. For example their website says that "The International Formula Council and each of its members support breastfeeding and the American Academy of Pediatrics' (AAP) position that breastfeeding is best, and that it offers specific child and maternal benefits…[However] statements that breastfeeding prevents disease or that formula feeding increases the risk of disease are misleading and lack support; the scientific data in many cases are inconclusive…For example, a study which shows a *decreased* risk for certain diseases/illnesses from breastfeeding does not necessarily translate to an *increased* risk from infant formula." http://www.infantformula.org/newsroom_20060614_C.html. Thus, while infant formula manufacturers claim that breastfeeding is "best for babies" and that there are many "benefits to breastfeeding" they deny that this means that there are any risks associated with the use of infant formula or that the use of formula is associated with illness in babies or mothers. It is also maintained that telling women that there are risks associated with premature weaning from breastfeeding and the use of infant formula is "negative" and "will make mothers feel guilty." Thus, "claims regarding potential detrimental health effects due to the absence of breast milk (and, by implication, the use of infant formula) are likely to cause unjustified worry among mothers who may formula-feed their infants." http://www.infantformula.org/newsroom_200607.html and "Recent reports regarding the science related to the alleged risks of not breastfeeding may unduly alarm mothers or make them feel guilty for not breastfeeding." http://www.infantformula.org/newsroom_20060614_C.html. The "double-speak" involved in such discussions is obvious. Infant formula manufacturers maintain that breastfeeding is "best" but deny that this means that infant formula are deficient in any way. Clearly this is a nonsense. They do not wish for parents to be able to make informed choices about infant feeding.

However, the issue of parents feeling guilty for using infant formula is worth addressing. The reality is that it is extremely difficult for mothers who have wanted to breastfeed but have not been able to breastfeed for as long as they wished. I am sure that other submissions will discuss this in greater detail, the experiences of such mothers requires more consideration than I am able to supply here. It is also very difficult for parents who have formula fed their babies to hear that there are risks associated with the use of infant formula. However, I do not believe that patronizing parents by protecting them from information that they might find difficult is helpful. It also does not assist those who are in the process of making decisions about infant feeding if they are not given accurate information. I believe that we need to give parents good information so that they can make truly informed choices about infant feeding and we need to support mothers so that they are able to breastfeed, avoiding the guilt issue altogether. We do not seek to protect parents from feelings of guilt in other areas of health by, for instance, not telling them that passive smoking harms children's health (in fact not breastfeeding can be considered more dangerous to infant health than passive

smoking) or that it is dangerous to leave children unrestrained in cars. Why should infant feeding be any different?

Increasing the duration of breastfeeding

The problem that we have in Australia is primarily with poor breastfeeding continuation rates. Our initiation rates are approaching 90% however, the drop off on discharge from hospital is such that less than half of babies are breastfeeding at all at six months of age (Australian Bureau of Statistics 2003). Thus, in this submission I will address the factors that I believe are causing early weaning and interventions that I believe will result in increased duration of breastfeeding in Australia.

Extensive effort has been placed into increasing breastfeeding initiation rates and this has been largely successful. The NSW government in particular should be commended for their new breastfeeding policy, which makes it mandatory for all NSW hospitals to work towards becoming "Baby Friendly." However, effort needs to be placed into decreasing the early use of infant formula and other foods for babies under six months and the use of infant formula in babies over six months of age. The National Health Survey found that the overall breastfeeding duration had not increased in the six years from 1995 to 2001 however, the use of infant formula by parents of three month olds had increased by greater than one third so that more than 20% of parents of breastfed babies were also using infant formula (in addition to the 40% or so of babies this age who were completely formula fed)(Australian Bureau of Statistics 2003). A recent study in Queensland found that 90% of 6 month old babies were being given infant formula (Gabriel, Pollard et al. 2005). This should be of great concern because the addition of other food to the young breastfed baby's diet not only dilutes the action of breastmilk in preventing illness and in providing normal nutrition but also actively alters the intestinal flora so as to make the infant more vulnerable to infection. Clearly, there needs to be not only education on the importance of breastfeeding but the risks of the introduction of other foods, including infant formula.

As previously mentioned, the 2001 National Health Survey found that the most common reason women gave for weaning early was insufficient milk supply (Australian Bureau of Statistics 2003) and this problem needs to be addressed in order for breastfeeding rates in Australia to increase. A perception of insufficient milk supply has been identified as a common reason for early weaning in many different locations around the world (Hillervik-Lindquist 1991; Binns and Scott 2002; Blyth, Creedy et al. 2002; Heath, Tuttle et al. 2002). Research has found that a perception of insufficient milk supply may not be a real insufficiency (Hillervik-Lindquist, Hofvander et al. 1991) but a result of a misinterpretation of infant behaviour (Tully and Dewey 1985), due to iatrogenic causes such as restricting breastfeeding frequency (Gussler and Briesemeister 1980) or a mother's lack of confidence in the ability to breastfeed (Blyth, Creedy et al. 2002). Mothers may also report that they weaned due to low milk supply because this is considered a socially acceptable reason for weaning (Hoddinott and Pill 1999; McLennan 2001). Prevention of the perception of insufficient milk supply involves providing women with support and information to enable them to accurately interpret their baby's behaviour. For instance knowing that it is common for babies to "cluster feed" in the evenings and breastfeed overnight and that this does not mean that that a mother does not have enough milk will reduce the likelihood of mothers believing that they do not have enough milk. It also involves continuing to fight the persistent myth that babies should be fed on a schedule and not feed frequently. As with many breastfeeding challenges, perception of insufficient milk supply can be prevented if women are able to associate with other women who are experienced breastfeeders and thus, one study found that women associated with a breastfeeding support group (such as the Australian Breastfeeding Association) reported insufficient milk supply at about $1/10^{th}$ of the frequency of women in the general population (Ladas 1972). My own research has found that successful long-term breastfeeders report that they experienced low milk very infrequently and I

believe that this was because many of these women were members of the Australian Breastfeeding Association.

Breastfeeding promotional materials are often unclear on the total recommended duration of breastfeeding. Materials also often assume that babies will be weaned early and it is rare to see images anywhere of non-newborns breastfeeding. For example the Federal government funded "Raising Children" website normalises early weaning by including instructions on weaning in the 3-12 month section of the website despite Australian recommendations that breastfeeding continue for at least 12 months. This expectation of early weaning is therefore being (unknowingly in many cases) supported by health experts. My research has found that women are being pressured by family and friends to wean their babies at a young age. The pressure can start when babies are as young as three or four months. It is very common for women to be asked in a clearly disapproving way, "Are you still feeding that baby?." Women are also told things like, "there's no benefit to breastfeeding at this age," "you're only doing that for your own [sexual] pleasure," "you are making your baby too dependent upon you by keeping breastfeeding," "you don't need to do that any longer," "breastmilk has no nutritional value after six months," "you will make your son gay if you keep breastfeeding," "your baby will sleep more if you wean," and "you're going to be going up to the school at lunch to breastfeed through the gate at this rate." The importance that this pressure to wean early plays in the poor breastfeeding continuation rates in Australia should not be underestimated. The National Health Survey in 2001 found that the second most common reason why women weaned their babies under three months is that they "felt it was time to stop" (Australian Bureau of Statistics 2003). I believe that this indicator is a measure of society's expectation that children should breastfeed for a short time only. Breastfeeding continuation rates in Australia will not increase unless there is effort placed into normalising and encouraging breastfeeding continuation. I would therefore suggest that health promotional materials need to be explicit in stating the recommended duration of breastfeeding (using both the NHMRC guideline of "at least 12 months" and the WHO/Unicef ball park recommendation of around two years as the minimum). They also need to show children of all ages breastfeeding, not just newborns and to show breastfeeding as a part of everyday life in many different contexts.

I would suggest that a public health campaign is needed to help increase the duration of breastfeeding. Rather than targeting mothers, campaign should target those around mothers who can make is difficult or easy for them to breastfeed, encourage them to continue breastfeeding or pressure them to wean. I say this because a recent public health campaign in the US was targeted at mothers and it was legitimately felt by many in the community that telling mothers to breastfeed in an environment that either does not permit them to do so or at least makes it very difficult for them to do so is not only ineffective but is cruel (Kukla 2006; Quinn 2006). However, if messages are targeted at others such as partners, friends or employers then this will assist in reducing the pressure on women to wean early and increasing the support for breastfeeding continuance. For instance, a campaign targeted at employers might encourage them to support their employees to breastfeed because it will increase the likelihood of them returning to work (Katcher and Lanese 1985) and decrease absenteeism (one large US employer found that employees whose children were not breastfed had an absenteeism rate seven times higher than employees whose children breastfed because of the increased need to care for sick infants (Geisel 1994)). A campaign targeted at men could exhort them to support the women they love (perhaps partners and daughters) to breastfeed since this will reduce their risk of them developing breast cancer (Collaborative Group on Hormonal Factors in Breast 2002) (and the longer the better, women who breastfeed each child for more than two years halve their risk of developing breast cancer as compare to women who breastfeed each child for six months (Zheng, Duan et al. 2000)). The importance of "others" in a woman's ability to breastfeed should not be underestimated; some research has found that the

opinion of a mother's mother and partner are very important determinants of whether she breastfeeds (Scott and Binns 1998; Ekstrom, Widstrom et al. 2003).

Breastfeeding in public

The stigma attached to breastfeeding in public is significant and this is especially so in areas with low breastfeeding rates. Social sanctioning of breastfeeding in public also increases with the age of the child. The unacceptability of breastfeeding in public has a threefold impact on supporting short breastfeeding continuation rates. Firstly, it makes it physically difficult for women to continue breastfeeding. Many mothers will avoid going out when they know that their baby is likely to want to feed. Some decide to express milk and bottle-feed in public or to formula feed in public. Others will persist in breastfeeding while they are out but find themselves made uncomfortable because they sense the disapproval of others. It is still not unusual for women to be asked to leave a venue because they are breastfeeding or to be directed to the toilets or a "private space" to breastfeed (I myself was so directed in a Sydney children's hospital). In this way, bottle feeding is viewed as providing freedom because women do not have to plan their outings around their baby's need to be fed or to find places to feed their baby in secrecy when out. The unacceptability of breastfeeding in public may also lead to women seeking to restrict breastfeeding frequency which can result in insufficient milk supply (as mentioned, the most common reason given by mothers for weaning in Australia). Secondly, that the unacceptability of breastfeeding in public increases with the age of the child perpetuates the message that mothers should wean their babies early. It is made very clear to women by some within the general public that a child "that old" should not still be breastfeeding ("that old" can be as young as four months). My research has found that the frequency with which Australian women seek to avoid breastfeeding in public increases with the age of the child. As children grow, the frequency with which they need to breastfeed decreases, thus women are able to more easily avoid breastfeeding in public (there is even a term for this in the literature, "closet breastfeeding"). This hides long-term breastfeeding from the public eye and prevents mothers from seeing each other breastfeeding. This is a problem because seeing other mothers breastfeeding non-newborns can help normalise the continuation of breastfeeding. Thirdly, the absence of breastfeeding from public sight prevents parents-to-be (children, young people and adults) from seeing breastfeeding and learning about it. It has been repeatedly identified that a lack of experience and knowledge of breastfeeding prior to birth contributes to breastfeeding difficulties and early weaning (Hill and Aldag 1991; Dykes and Williams 1999). Indeed, many new mothers have never seen breastfeeding until they actually undertake it themselves. However, the embodied knowledge that results from regularly seeing breastfeeding is proven to assist women to breastfeed their children (Hoddinott and Pill 1999). The unacceptability of breastfeeding in public hides breastfeeding from the public eye which perpetuates the self consciousness that women feel when they feed their babies in public because they rarely see another mother feeding a baby in a public place. The attention that is given to public figures who have fed their babies in public places (such as Kirsty Marshall in the Victorian parliament and Kate Langbrook on the television program "The Panel") does not assist women in gaining confidence that breastfeeding in public is a normal, everyday activity.

Addressing the difficulties faced by women breastfeeding in public should be a priority of government. We need to discourage harassment of breastfeeding women and to encourage them to breastfeed in public with their newborns, older babies and toddlers. A public health campaign is necessary to ensure that women are aware of their right to breastfeed in public and that members of the public are aware that it is sexual discrimination to ask a woman to cease breastfeeding or to leave a location because she is breastfeeding. Whether women are considered as breastfeeding discretely or not should not be considered an issue since "she is not being discrete enough" is commonly used by those harassing mothers to justify their actions. To illustrate, there have been a

couple of cases recently that I am aware of where women were asked to leave venues (both restaurants, one a registered club in Canberra and one a cafe on the NSW Central Coast) because they were breastfeeding. Both women were breastfeeding normally but were asked to leave while they breastfed. Both women left the restaurants. After these incidents both of the individuals who harassed the women claimed that they asked them to leave because they were exhibitionists and exposing "too much breast." The aim of these claims was clearly to discredit the mothers involved (perhaps after discovering that it was illegal to ask a woman to leave because she was breastfeeding). One mother made a complaint about her treatment to the Human Rights Office in the ACT and the matter was resolved at mediation, with the Club involved apologising, retracting the accusation of breast exposure and promising to educate staff and patrons about the rights of breastfeeding women. These were normal mothers, feeding their babies normally. They were mortified at the claims of the club and restaurateur that they had been wilfully exposing themselves and not just feeding their babies. If public health campaigns exhort women to be discrete in breastfeeding or are seen to promote discrete breastfeeding this will only lead to an increase in such claims and make it more difficult for women to breastfeed in public.

Preventing the unnecessary exposure to infant formula in hospital

Many Australian babies are exposed to infant formula in hospital. This is particularly the case for premature and low birth weight babies because prematurity or maternal illness can delay the onset of copious milk production in their mothers. Premature and low birth weight babies fed infant formula are very vulnerable and are, for instance, at risk of developing a disease called necrotising enterocolitis (NEC). Up to10% of low birth weight babies develop NEC (Loh, Osborn et al. 2001; Landers 2003) which is a costly condition to treat and is an extremely serious condition, 20-35% of the babies who develop NEC will die as a result (Lucas and Cole 1990; Loh, Osborn et al. 2001; Landers 2003). Babies who are fed infant formula have a 500-1000% increased risk of developing NEC (Lucas and Cole 1990). However, in those circumstances where mothers are unable to provide their own milk for their babies, human milk banks can provide babies with what they need. Professors Peter Hartmann and Karen Simmer in Perth have recently set up a human milk bank at King Edward Memorial Hospital with the assistance of private funding and midwife Maera Ryan has raised funds to provide human milk to sick babies on the Queensland Gold Coast. However, these are the only human milk banks in Australia. Human milk banks are a cost effective intervention because low birth weight babies who are not provided with breastmilk are not only less likely to survive but will require more interventions in hospital and have a longer hospital stay (Schanler, Shulman et al. 1999).

Term babies are also sometimes given infant formula to treat hypoglycaemia or if their mother's milk supply is delayed due to illness or excessive blood loss after birth. Early exposure to infant formula (even just one bottle) is thought to predispose infants to developing Type 1 diabetes, asthma, eczema and other allergies (Villalpando and Hamosh 1998; Davis 2001; Stene, Joner et al. 2004). However, government and health department support is required to make human milk available to whomever needs it. Overseas experience has shown that the costs associated with banked donor milk are more than covered by the savings to the hospital system resulting from decreased costs due to illness when babies are provided with human milk (Arnold 2002).

The availability of donor human milk via milk banks would also have the flow on impact of assisting families to understand the importance of human milk to the health of infants and that there are real risks associated with the use of infant formula. Currently, that so many babies are given infant formula in hospital creates the impression in parents minds that "infant formula must be safe because if it wasn't they wouldn't have given it to my baby in hospital." The use of infant formula in hospitals also markets infant formulas since parents will often continue to use the brand of

formula the baby was given in hospital. I would also recommend that hospital protocols should explore relactation in cases where formula fed infants are hospitalised for illnesses known to be associated with early weaning such as gastroenteritis and respiratory infections as occurs in some locations (Banapurmath, Banapurmath et al. 2003). This might not only reduce the incidence of subsequent illness in these children but assist the community in making the connection between illness and type of infant feeding.

Education of Health Professionals

A problem that breastfeeding women regularly encounter is that their health care providers do not have sufficient knowledge of breastfeeding to be able to appropriately care for them and their babies. This lack of appropriate care often leads to the termination of breastfeeding. For instance, health professionals may be unaware of normal infant behaviour or growth patterns and prescribe infant formula supplementation for normal, healthy babies. They may advise women to wean in order to take medication that is safe to take while breastfeeding or inappropriately treat conditions such as mastitis resulting in the development of a more serious condition such as breast abscess requiring hospitalization and surgery (often the mother will wean because this is a terribly painful condition). They may ignore conditions such as tongue tie that can severely impact breastfeeding because they "don't believe in it" and even order lactation knowledgeable staff not to discuss the issue with mothers. Further, while lip service is paid to breastfeeding very often termination of breastfeeding is suggested as the first course of action in the treatment of any illness or as a solution to any problem and further investigation will not be carried out until it occurs. Why is there so much ignorance amongst health providers? The reason is firstly that most health professionals receive very little education about breastfeeding during their formal education. For example doctors might receive only two hours of education on breastfeeding through the whole of their training. Research has confirmed that many health professionals have very little knowledge about breastfeeding (Bagwell, Kendrick et al. 1993; Freed, Clark et al. 1995; Brodribb and Fallon 2005). It seems that for many health professionals the knowledge that they do have about breastfeeding comes mostly from their personal experience (Brodribb and Fallon 2005) and that their knowledge (or ignorance) reflects that of society in general. In addition, as described, for some health professionals an important source of education may be that provides by infant formula salespeople who visit their workplace. There are health professionals who have a good level of knowledge about breastfeeding. These are generally health professionals who have successfully breastfed themselves (or their partners have successfully breastfed) and they have developed an interest in breastfeeding and educated themselves on the subject. Such health professionals are in high demand. In my local area the GPs who are known to have expertise in lactation are overwhelmed with patients. I believe that this is because breastfeeding women can find it very difficult to get appropriate medical care and when they hear about someone who can help they seek their assistance. Although I am outlining the problem of lack of education of health professionals about breastfeeding I should note that recently trained midwives have received substantial education about breastfeeding in the achievement of their qualification and there are also health professionals who have had post-graduate training in lactation to become lactation consultants. Such knowledgeable health professionals are a real asset to mothers and the health system but there are not nearly enough of them.

It should be a priority to increase the formal education that all health professionals receive on breastfeeding and infant formula in their training so that they are able to appropriately care for breastfeeding women and their babies. Some form of easily accessible (perhaps web based) continuing education on lactation is needed so that those professionals who are already qualified can up-skill. Education provided by infant formula salespeople should be recognized for what it is,

that is, its purpose is to market infant formula and it is neither a good source of information about breastfeeding nor about infant formula.

Education of health professionals who work with mothers in the community should be a priority in action to increase the duration of breastfeeding. GPs are often the first line of call by women experiencing feeding difficulties that require medical care and yet many are poorly equipped to deal with them having neither the time nor the skills to be of assistance (and unfortunately they often directly undermine breastfeeding). One solution to this challenge might be for lactation services to receive Medicare rebates where the mother is referred by her GP. Lactation consultants or qualified breastfeeding counselors might therefore be employed by a general practice to provide services to patients freeing up a doctor's time while providing mothers with the support and assistance they need. In such a situation it would be inevitable that the knowledge and skills of doctors would be increased. Early childhood nurses have extensive contact with new mothers and it appears that industry recognises this because they have placed significant resources into courting them as a profession and providing them with "education." Non-industry funded education of early childhood nurses in breastfeeding and normal infant behaviour should also be considered vital if we wish to increase breastfeeding rates in Australia.

Disadvantaged communities

In Australia the likelihood of a woman breastfeeding and how long she breastfeeds for is related to how old she is, how well educated she is and her socioeconomic status. The older, the more well educated and the wealthier a mother is the more likely she is to breastfeed and to breastfeed for longer (Scott, Landers et al. 2001). The younger, the less well educated and the poorer a mother is the less likely she is to breastfeed and the shorter the breastfeeding duration will be (Scott, Landers et al. 2001). It is important to note that this relationship between maternal age, education, socioeconomic status and breastfeeding exists in every developed country however, this was not always the case. In fact it was the older, more well educated and wealthy women who were first to take up artificial feeding in the early 20th century and society as a whole followed. In the 1970s the trend similarly was for the older, more well educated and wealthy women to take up breastfeeding again however, we have not seen the uptake of breastfeeding continue through all of society (note: in many developing countries the uptake of artificial feeding by societies did not occur so that in some countries they are only now at the stage where the wealthy and well educated artificially feed while the poorest, less well educated women still breastfeed (Daniels and Adair 2005)). Unfortunately, in Australia breastfeeding initiation and duration rates appeared to have stalled and it is the most disadvantaged women and their babies who are those worst affected. The following quote from James P Grant, former Executive Director of Unicef succinctly describes why breastfeeding is important for those babies born to the poorest and most disadvantaged women: *"Breastfeeding is a natural "safety net" against the worst effects of poverty. If the child survives the first month of life...then for the next four months or so, exclusive breastfeeding goes a long way toward cancelling out the health difference between being born into poverty and being born into affluence .... It is almost as if breastfeeding takes the infant out of poverty for those first few months in order to give the child a fairer start in life and compensate for the injustice of the world into which it was born."* Australians who are socioeconomically disadvantaged suffer from poorer health than their wealthier counterparts (Australian Institute of Health and Welfare 2004), improving their health begins with increasing breastfeeding rates.

There has been research looking at the experiences of disadvantaged women in populations where breastfeeding initiation rates are low and breastfeeding durations short. It has been found that disadvantaged women have often seen bottle feeding, or indeed bottle fed babies, since childhood. They are familiar and comfortable with bottle feeding (Bailey, Pain et al. 2004). In contrast,

breastfeeding is something that they have rarely (if ever) seen and something that they are unfamiliar with (Hoddinott and Pill 1999). Women may attempt to transfer the only knowledge that they have about infant feeding (that is, knowledge based on formula feeding) to their breastfeeding attempts, which can be disastrous for breastfeeding (Bailey, Pain et al. 2004) and their family and friends lack the knowledge or experience to help them. They are also operating within an environment where the accepted use for breasts is sexual in nature (Guttman and Zimmerman 2000) and negotiating how and where to breastfeed is difficult. For some women, over crowding can make their own home a public space so it is difficult for them to feed their babies anywhere. The societal pressure to wean early is likely to be greater for disadvantaged women. Women may be ridiculed for breastfeeding and socially isolated (Guttman and Zimmerman 2000). Lowly paid women in the workforce are less likely to have accommodation to facilitate breastfeeding such as lactation breaks and somewhere private to express milk. Given these circumstances breastfeeding is impossible for many women.

How can we change this situation? It is clear that improving breastfeeding rates among disadvantaged women is not simply a case of providing education (although education targeted creating a society more supportive of breastfeeding may assist). Rather, disadvantaged women need "apprenticeship-style" learning opportunities where breastfeeding is modeled for them and where they are provided with a repertoire of options from which they can find solutions to the challenges that they face (Hoddinott and Pill 2002; Hoddinott, Chalmers et al. 2006). Such learning opportunities are best facilitated via peer support (Sikorski, Renfrew et al. 2003). Peer support shows women how it is possible to integrate breastfeeding into their daily lives in their homes, the community and in the workplace to enable them to continue breastfeeding. The cultural factors that work against breastfeeding are so strong that women who have migrated to Australia from countries where women normally breastfeed long-term, assimilate local infant feeding practices and tend to bottle feed in Australia and the longer they have been in Australia the shorter their breastfeeding duration will be(Rossiter 1992).

There have been many peer support projects targeting encouraging and enabling disadvantaged women to breastfeed. Some of these projects have been very successful. However, funding for these projects is almost universally of a short-term duration only and once the funding is exhausted the project is no longer able to continue. This is a problem that needs to be overcome if increasing breastfeeding rates in disadvantaged communities is desired. The Australian Breastfeeding Association is the world's largest breastfeeding support organisation when considered on a per capital basis and is well placed to assist in any initiatives to increase breastfeeding rates amongst disadvantaged populations.

The following is an example of how mothers who would otherwise not breastfeeding can be enabled to do so. Mothers of premature babies face many challenges in breastfeeding their babies and breastfeeding rates are generally very low, perhaps 20% of all mothers breastfeeding at discharge and rates amongst disadvantaged mothers of premature babies is even lower. However, where mothers are provided with appropriate support and information this need not be the case. Paula Meier a NICU nurse in the Rush Children's Hospital in Chicago works with a population of mostly poor, inner-city, minority mothers, women who usually do not breastfeed, and is incredibly successful in helping them to breastfeed (Dr Meier will be speaking at a conference in Australia in August). Ninety-seven percent of Rush mothers initiate providing milk for their babies and continue to do so until after discharge. Her unit provides mothers with information about why their milk is important for their babies and provides them with practical assistance to breastfeed including the support of peer counselors who spend time with mothers sharing their own stories and experiences and helping them with the practical aspects of providing milk for their babies. Interestingly, mothers whose babies are transferred to Rush from other hospitals bottle feeding are provided with

information about the importance of breastmilk for their babies and as a result these mothers decide to provide their own milk to their babies. These mothers are usually very angry that they had not been given good information previously and are scathing about the unprofessional actions of others in not telling them why formula feeding is not desirable for their babies (Miracle, Meier et al. 2004). Peer support is the most important aspect of the assistance that Rush provides to mothers since most of the mothers at this hospital had intended to bottle feed and many of them have never known anyone who has breastfed.

Research funding.

Recently there has been some discussion in the public domain of the ways in which research funding is allocated. It has been noted that there is currently an emphasis placed on funding research that has the potential for resulting in income generation via commercialisation. Even the CSIRO Flagships Program, which has a preventative health component, places emphasis on commercialisation of research. This emphasis has been questioned by leading scientists and it has particular relevance to research into aspects of human lactation, which, by the very nature of breastfeeding, are unlikely to have results that can be commercialised. In addition, researchers investigating aspects of breastfeeding are unable to obtain industry funding because of the conflict of interest this creates. I would suggest that it would be appropriate for research priorities be placed on projects that have the potential to save government money and increase productivity. Without appropriate funding, investigation of interventions that might increase breastfeeding prevalence and reduce the use of infant formula cannot occur.

Monitoring breastfeeding rates

I was dismayed I when recently contacted the Australian Bureau of Statistics to ask when new breastfeeding statistics would be provided by the National Health Survey. Infant feeding practices were last considered in 2001 however, I was told that infant was not being considered in the next National Health Survey because it was "not a priority". I was told that breastfeeding *may* be considered in 2010 however, even if this is the case it would make it 9 years between collection of statistics. This makes it extremely difficult to know what is happening and whether breastfeeding rates are increasing or decreasing and whether the use of infant formula or other breastmilk substitutes is increasing or decreasing. As mentioned, the use of infant formula by breastfeeding women (ie mixed feeding), increased by more than one third between 1995 and 2001 (Australian Bureau of Statistics 2003), what has happened in the six years since? We don't know, but if there has been a comparable increase this would be having a significant negative impact on the health of babies. It is a truth that "what we value we count," the absence of breastfeeding statistics collection for long periods of time indicates the low priority that has been placed on the health of mothers and babies. As well as actually collecting infant feeding data, it is extremely important that the accuracy of data be considered. It is relatively easy to collect good quality data on "any" breastfeeding however, given the commonness of mixed feeding (including the use of infant formula, juices, teas and early introduction of solid foods) it is important to also measure the degree of breastfeeding and the usage of other foods. Unfortunately, surveys are not always well designed to measure the degree of breastfeeding and for instance a recent NSW Health Survey defined "exclusive breastfeeding" as "not receiving other foods at least once a day," so children could be consuming large amounts of other foods and still be classed as "exclusively breastfeeding"(Centre for Epidemiology and Research 2006). I would refer the committee to the excellent publication "Towards a National System for Monitoring Breastfeeding in Australia" which canvasses the issue of why it is important to collect breastfeeding statistics but also on why it is important to be very careful when collecting data about infant feeding (Scott and Binns 1998). This publication also presents recommendations for breastfeeding statistics collection in Australia. Australia does not meet its international reporting

obligations by collecting breastfeeding data regularly and reporting to WHO and Unicef and this is an additional reason for considering the institution of the regular collection of accurate infant feeding statistics.

Infant feeding in emergencies

I would like to bring the committee's attention to an issue that may at first appear trivial but which I believe is important. Disasters and emergencies of different kinds are experienced around the world, with what appears to be, increasing regularity. Australia has seasonal emergencies in the form of cyclones and bushfires and we have the awareness that other sorts of emergencies might eventuate at some time (for example, an influenza pandemic). Governments and non-governmental organisations have developed disaster preparedness plans to assist the general public in preparing for such emergencies. Unfortunately such plans do not alert parents to the precarious situation in which infants who have been weaned from breastfeeding are placed in emergencies. Rather, carers of babies are informed that preparing for an emergency involves storing infant formula (eg Australia's Health Management Plan for Pandemic Influenza http://www.health.gov.au/internet/wcms/publishing.nsf/Content/ohp-pandemic-ahmppi.htm). Babies who are formula fed are at risk because of the difficulty of providing clean water and power during an emergency and because food security is an issue. I would like to suggest that emergency preparedness materials for seasonal emergencies might contain a sentence along the lines of "Mothers who are breastfeeding and are considering weaning may wish to delay weaning until after the cyclone/bushfire season because of the increased risks associated with the use of infant formula when power and water supplies are disrupted." Documents such as the flu pandemic plan should contain information so that those who are interested in preparing for a pandemic are made aware of the risk that formula fed babies are placed at in emergencies and breastfeeding is endorsed as providing food security for infants. Even a short term disruption in the supply of formula and water supply can have serious consequences such as that seen in the aftermath of Hurricane Katrina when many formula fed babies died or became brain damaged due to dehydration and hyponatraemia.

Such preparation is important not only for Australians but also for our actions overseas. Unfortunately because Westerners tend to think that babies need infant formula, when there is an emergency, donations of infant formula are sent by the West (including Australians). This infant formula is distributed and used resulting in greatly increased morbidity and mortality. For example, after the recent earthquake in Java 80% of children under two years were given donated formula (Maclaine and Corbett 2006) and a recent flood in Botswana saw 30% of formula fed babies die in some locations while there were zero deaths of breastfed babies (Anonymous 2006). It is this important for the general public to know that when there is an emergency, formula fed infants are incredibly vulnerable and breastfeeding needs to be supported.

Conclusion

I hope that my submission has been of assistance to the Committee. I regret that time constraints prevent me from writing a more extensive submission. However, I would be pleased to provide evidence at a committee hearing in Sydney if this was deemed desirable. It may also be worth the Committee considering what has been happening in Scotland with regards breastfeeding promotion. Scotland had one of the worst breastfeeding rates in the world but has been successful in increasing rates in recent years via concerted effort and a multidisciplinary approach http://www.breastfeed.scot.nhs.uk/

Everyone will say that they support breastfeeding (I am sure that you will even get submissions from infant formula manufacturers saying that they support breastfeeding). You would have to

search very hard to find anyone who would say that they do not. However, my research, my understanding of other Australian research and my personal experience lead me to conclude that breastfeeding is only supported when it is practiced in a very restricted way. It is only supported for young infants, only when the mother does not breastfeed frequently and only when it is not practiced in public. Furthermore, although lip service is given by governments, health services and individual health providers to breastfeeding this does not translate into real support to the individual mother. This situation needs to change. I wish the committee well in its consideration of these issues.

Regards

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