



Protecting, promoting
and supporting breastfeeding.



**AUSTRALIAN COLLEGE OF MIDWIVES
BABY FRIENDLY HEALTH INITIATIVE**

**Submission to the Parliamentary Inquiry into the
Health Benefits of Breastfeeding**

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Part A: The Extent of the Health Benefits of Breastfeeding

There has been, and continues to be, much research into breastfeeding and breast milk. The evidence is overwhelmingly in favour of breast milk providing complete and optimal nutrition for infants less than 6 months of age; from 6-12 months providing the major food source with the slow introduction of appropriate other foods. After 12 months breast milk still provides an important food source, for as long as the mother and child are happy to continue to breastfeed (NHMRC 2003, Queensland Health 2003). There is evidence to suggest that breastfeeding is also the best choice to meet the baby's emotional needs (Centre for Attachment 2007).

Breast milk is a living substance containing complex and vital antibacterial, immunological and hormonal growth factors. These promote optimal growth and development and at the same time help protect infants from infection and disease (Lording 2006).

The widely held view that infant formula and breast milk are so similar that they are interchangeable is false and there is evidence of negative consequences related to making the choice not to breastfeed. Infant formulas (artificial baby milks) do not have the same health, nutritional, immunologic, developmental and psychological qualities as breastfeeding and breast milk (Lording 2006). Formulas do not have the ability to change in makeup during a single feed or over the full period of breastfeeding as breast milk does. As new discoveries are being made in regard to the diversity and truly unique nature of breast milk it increasingly shows that infant formulas are an inferior product.

When comparing breast milk fed infants/children to those who were formula fed the formula fed were twice as likely to die in the first 6 weeks of life, 5 times as likely to develop gastroenteritis (Philip & Radford 2006), twice as likely to develop eczema and diabetes and up to 8 times at risk of developing lymphatic cancer (Lording 2006). There is also considerable evidence to show that those infants/children who were fed infant formula had lower IQ scores (Walker 1993, Wood et al 2003); also they had an increased risk of cardiovascular disease and diabetes (Wood et al 2003)

Other increased health problems that have been identified for formula fed infants/children are necrotizing enterocolitis in premature infants, otitis media (ear infections), urinary tract infections, bacterial meningitis, diabetes, obesity (Philip & Radford 2006), respiratory tract infections and illnesses, celiac disease, haemophilus influenzae bacterium (HIB), development of dental caries in infancy and childhood (NSW Health 2005).

Mothers also benefit from breastfeeding. There is compelling evidence that mothers who **do not** breastfeed are at an increased risk of breast cancer (Allen & Hector 2005, Akre 2006, NSW Health 2005), ovarian and uterine cancer (NSW Health 2005, Akre 2006). These mothers are also at increased risk of postpartum haemorrhage, iron deficiency anaemia and osteoporosis (Akre 2006) as well as rheumatoid arthritis (Allen & Hector 2005).

There is convincing evidence that the risks of these conditions are of a dose response effect. That is that the longer the duration, and the more exclusive the breastfeeding, the more decreased the risk. A review of 47 studies in 30 countries indicated the relative risk of breast cancer decreased by 4.3% for every 12 months of breastfeeding (Allen & Hector 2005).

More research is being done into the emotional benefits of breastfeeding for mothers and babies. Breastfeeding sets the grounds for positive bonding between mother and baby (Allen & Hector 2005). In an optimal breastfeeding situation mother and baby 'talk' to each other almost constantly (Centre for Attachment 2007). Newborns feed often, and around the clock, therefore they stay in close contact with their mother. Mothers learn the baby's cues and hunger signs as well as each others need for closeness. Baby-led breastfeeding helps the mother establish a good milk supply, teaches the baby its mother will sensitively and effectively respond to fluctuating needs, and always be aware of the baby's signals (Centre for Attachment 2007).

Through this awareness, the baby's ability to feel fully nurtured and secure is met. Over time the baby moves to increasing independence and the intense need for this security lessens. However the foundation of understanding and communication between mother and child remains. Breastfeeding promotes eye contact – associated with a mutually reinforced cycle of pleasurable hormones that flow between mother and baby. Skin to skin contact is inherent in breastfeeding and the oxytocin released while breastfeeding is important in the creation of positive and healthy social connections. It inhibits the impact of stress and increases healing rate of wounds. It is also essential for bonding and feeling good in relationships (Centre for attachment 2007). This feeling is essential in the formation of positive relationships as the child grows to adulthood.

A recent study over 16 years of more than 2,500 Western Australian children found that children who were exclusively breastfed for less than 6 months had a 52% increased risk of mental health problems at 2 years of age than children who were exclusively breastfed for more than 6 months. The risk increased to 55% at 6 years old and 61% at 8 years old (Oddy 2006, Telethon Institute 2006).

Recent research also indicates breastfeeding helps protect babies from negative effects of postnatal depression (Allen & Hector 2005). It appears the emotional and physiological experience of being breastfed alleviates some of the impact of living with a depressed mother. The mother gets the advantage of relaxing breastfeeding hormones which enables her to connect with her baby. (Centre for Attachment 2007).

Night waking serves many healthy and protective functions. It allows frequent feeding and intake of nutrition for growth, creates an opportunity for emotional reconnection and stimulation for optimal brain development, is potentially protective against SIDS (Centre for Attachment 2007). Allowing babies to have extended periods of deep sleep may lead them to be more vulnerable.

More recently it has been recommended that drug dependant mothers also be encouraged to breastfeed with appropriate support and precautions. The early skin to skin contact that is offered with breastfeeding is important to these women and should be actively encouraged for mothers who are fully conscious and aware and able to respond to their babies. A harm-minimization approach is recommended. It should be noted that harm-minimization does not mean advising these women not to breastfeed (NSW Health 2006).

Part B: Evaluate the impact of Marketing of Breast Milk Substitutes on Breastfeeding, in particular, in disadvantaged, Indigenous and remote communities.

In 1974, the World Health Organisation (WHO) observed commercial pressures contributing to a global decline in breastfeeding. In response to this they began drawing up the International Code of Marketing of Breast milk substitutes – the WHO Code – to try to restrain these pressures. Since that time research has confirmed the effect that advertising has on women when making choices regarding infant feeding (McGuire 2006).

In 1981 Australia was one of the 118 countries that adopted the WHO code resolution (McGuire 2006). In 1992 the Marketing in Australia of Infant Formula (MAIF) Agreement was developed, signed by a number of infant formula companies and authorized under the Commonwealth *Trade Practices Act 1974*. However this document is not legally binding. It does not include other milk products, foods, beverages or feeding bottles and teats. Toddler (or ‘follow-on’) formula does not come under the MAIF agreement and as such high profile advertising can be used to promote formula in this way. Retailers of infant formula are also excluded from the MAIF agreement (APMAIF - date unknown) potentially eroding the impact of this agreement as ways of avoiding the legislation occur.

Infant formula manufacturers market their products very effectively. There is effort to increase the size of the overall market along with individual company increases in market share (Akre 2006). This picture is consistent world wide.

In 1993 a government report stated the intention to limit advertising for retail outlets, bottle and teat manufacturers. However agreements have not been signed enabling this to occur (MacGuire 2006). Direct and in-direct advertising and promotion of infant formula is seen daily and the public message is that formula and breast milk are equal. The myriad of formulas available make a variety of health claims including that they will assist infantile colic, sleeping and reflux. Television soap operas and dramas frequently show young families and babies where bottle feeding is seen, but breastfeeding is not. Additionally, the very wording of breast milk substitutes as ‘formula’ implies that it is better than the biological or traditional way of feeding infants and young children. Disadvantaged women, particularly those who are poorly educated, may be the most vulnerable.

Several studies suggest early supplementation with infant formula interferes with the successful establishment of breastfeeding and, in many cases, leads to early weaning. Potential harmful outcomes of supplementation include the reinforcement of negative beliefs about breastfeeding (Gagnon et al 2005). Howard et al (2000) noted that advertising and attitudes of medical care providers had major influences on women’s choice of infant feeding methods.

In disadvantaged or resource-poor communities, formula feeding can have increased risk. These communities include Indigenous, non-English speaking background, young mothers and lower socio-economic groups. The increased risk may be for one or more of the following reasons:

- no money to buy a quality, appropriate infant formula (artificial baby milk);
- water is often contaminated;

- low levels of literacy or limited English understanding (therefore difficulty with preparation);
- own level of hygiene poor;
- no refrigeration facilities to store prepared infant formula;
- feeding bottles and teats are of inferior quality (often with inaccurate volume markers);
- sterilization of bottles, teats and other preparation equipment limited/inadequate; and
- inappropriate dilution of formula (Akre 2006).

Zubrich et al (2004) found that many Aboriginal families in Western Australia were experiencing financial strain. 44% reported only having enough money to last to the next pay day. The survey also confirmed that the physical health of the Aboriginal children in the study was lagging behind their non-Aboriginal peers. 11% of babies were born with low birth weight (7% of the general population), 11% were teenage mothers (2% of the general population). The study also found that 34% of Aboriginal babies were breastfed until 12 months of age with prevalence increasing related to levels of isolation. 29% of Aboriginal babies in Perth metropolitan area were breastfed until 12 months, as compared to 49% in extremely isolated areas. One explanation for this is that advertising and relative availability of formula could impact the decision making for Aboriginal families in the city.

Breastfeeding must be protected as the biological norm. Breast milk substitutes, infant feeding bottles, teats and pacifiers should **not** be seen as the norm. Advertising, marketing and retailing has the effect that use of breast milk substitutes (infant formula) and bottles, teats and pacifiers are seen as an easy or equal way of feeding a baby. There is a need for the MAIF agreement to be made legally binding, to include all of the above items and to have heavy penalties attached to it.

Part C: The potential short and long term impact on the health of Australians of increasing the rate of breastfeeding.

Breastfeeding is one of the most effective primary health care strategies. As such it requires the support of the entire community if the rate of breastfeeding is to be increased.

Increasing the rate of exclusive breastfeeding will see the following:

Short-term impacts

Reduced infant mortality:

- exclusively breastfed infants are half as likely to die within the first 6 months of life (Philip & Radford 2006); and
- potentially protective against SIDS (Centre of Attachment 2007).

Reduced infant and childhood morbidity:

- half as likely to develop eczema (Lording 2006);
- reduction by half of childhood type 1 diabetes (Lording 2006);
- 8 times reduction in incidence of developing lymphatic cancer (Lording 2006); and
- reduction in necrotizing enterocolitis in premature infants, otitis media (ear infections) urinary tract infections, bacterial meningitis, diabetes, obesity (Philip & Radford 2006), respiratory tract infections and illnesses, celiac disease, haemophilus influenzae bacterium (HIB), development of dental caries in infancy and childhood (NSW Health 2005).

Improved postpartum maternal health

- Decreased risk of postpartum haemorrhage and iron-deficiency anaemia (Akre 2006); and
- Improved maternal well-being and potential for decreased maternal stress and anxiety due to the effect of breastfeeding hormones such as oxytocin (Allen & Hector 2005, Centre for Attachment 2007).

Long-term impact

Socio-cultural

- Increase in 'clever country' where stimulation for optimal brain development means that IQ scores for infants exclusively fed breast milk are higher (Walker 1993, Wood et al 2003);
- Emotional benefits, where breastfeeding provides the framework for positive bonding and family dynamics, plus building positive relationships as the child grows to adulthood (Centre for Attachment 2007, Allen & Hector 2005); and

- The emotional and physiological experience of being breastfed alleviates some of the impact of living with a mother who suffers from postnatal depression or other depressive disorders.

Reduction in morbidity and health costs for families and the community due to:

- Decreased risk of cardiovascular disease (Wood 2003);
- Decreased risk of type 2 diabetes (Wood et al 2003);
- Decrease in incidence of obesity. Breastfeeding is a self regulated form of infant feeding. As long as the baby has easy unrestricted access to the breast they will feed to meet their needs. This can be contrasted to feeding infant formula where there is a tendency to encourage the infant to finish a whole bottle every time, even if the infant is not really hungry; and
- Significant improvement in women's health and morbidity as a long-term benefit of their breastfeeding their infants:
 - Decreased risk of breast cancer (Allen & Hector 2005, Akre 2006, NSW Health 2005),
 - Decreased risk of ovarian and uterine cancer (NSW Health 2005, Akre 2006);
 - Decreased incidence of osteoporosis (Akre 2006); and
 - Decreased incidence of rheumatoid arthritis (Allen & Hector 2005).

There is compelling evidence that the risks of these conditions are of a dose-response effect. That is, the longer the duration and the more exclusive the breastfeeding, the more decreased the risk. A review of 47 studies in 30 countries indicated the relative risk of breast cancer decreased by 4.3% for every 12 months of breastfeeding (Allen & Hector 2005).

One hypothesis proposed is that early in life the foetus or infant is susceptible to adverse influences. The adverse influence then effects organ structure and function for life (Wood, Mortenson, Endacott 2003). This research reinforces the notion that events in early life have a bearing throughout the whole of life. As life expectance increases it is increasingly important that optimal health is maintained from birth. Breastfeeding is one aspect that can provide, among other things, optimal nutrition from birth. Positive health consequences are seen throughout the whole of life.

Part D: Initiatives to encourage breastfeeding

The **Baby Friendly Health Initiative** incorporates two initiatives – Baby Friendly Hospital Initiative and Baby Friendly Community Health Centre project – which were set up to protect, promote and support breastfeeding in maternity hospitals and facilities supporting breastfeeding mothers and their infants in Australia.

The launch of the Baby Friendly Hospital Initiative by WHO and UNICEF in 1991 was intended to increase the initiation and duration of exclusive breastfeeding world-wide by promoting breastfeeding as the biological norm. At that time, many specific hospital practices were found to be harmful to the initiation and establishment of successful breastfeeding.

The 10 Steps to Successful Breastfeeding were developed by WHO and UNICEF. The 10 Steps are statements and measurable standards against which a maternity hospital or facility that provides care to breastfeeding mothers and their infants can be assessed. They are a series of best practice evidence-based standards (Philip & Radford 2006) and can be used in the quality improvement process and total quality management program.

If the hospital or facility can demonstrate compliance with each of the 10 Steps, compliance with the WHO Code of Marketing of Breast Milk Substitutes and achieve a high exclusive rate of breastfeeding at discharge (generally greater than 75%), then “Baby Friendly” (BFHI) accreditation can be achieved.

The 10 Steps to Successful Breastfeeding are:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff;
2. Train all health care staff in skills necessary to implement this policy;
3. Inform all pregnant women about the benefits and management of breastfeeding;
4. Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour and encourage mothers to recognise when their babies are ready to breastfeed, offering help if needed;
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants;
6. Give newborn infants no food or drink other than breast milk, unless *medically* indicated;
7. Practise rooming-in: allow mothers and infants to remain together 24 hours a day;
8. Encourage breastfeeding on demand;
9. Give no artificial teats or dummies to breastfeeding infants; and
10. Foster the establishment of breastfeeding support and refer mothers on discharge from the facility.

Steps 1 - 3 focus on the foundations of good breastfeeding practice. Staff education is a central component of the 'Baby Friendly' program. It is recognized that staff need to be well-trained in contemporary, evidence based breastfeeding practices for the necessary changes be made to increase breastfeeding rates (Philip & Radford 2006). Antenatally, women need to have access to clear and appropriate information regarding breastfeeding, health benefits and infant feeding practices, to be beneficial for initiation of breastfeeding and optimal infant feeding outcomes. It has been shown repeatedly in developed countries that one third to half of women decide how they will feed their babies before they are pregnant (World Health Organization 1998). Step 3 works toward this early education and discussion with prospective parents by "informing all pregnant women about the benefits and management of breastfeeding".

Steps 4 - 9 describe evidence-based best practice measures necessary for early post-natal support of breastfeeding mothers and infants.

Step 10 requires mothers to be given information about breastfeeding support they can access in their communities after hospital discharge. This Step is increasingly important due to the increase in early discharge from hospital, concurrent with a trend for decreased extended familial support across Australia. Appropriate, easily accessed, community breastfeeding support networks will help maintain a new mother's confidence to avoid or solve any problems which may arise. This contributes significantly to increasing the duration of breastfeeding (Philip & Radford 2006).

The Baby Friendly Hospital Initiative was launched in Australia in 1991. During these early years the UNICEF Committee in Australia was overseeing the Initiative. In 1995 the Australian College of Midwives assumed this responsibility. There has been some financial assistance from a government grant in 2002 – 2004. Apart from this the Initiative has run on a self-funding basis, with financial support from the Australian College of Midwives, a not-for-profit organization. Whilst there is one part-time manager supporting the administration of the project, there has not been the financial support to ensure that the project has the maximum effect. There is no independent funding for this initiative, making it difficult to extend to the program's full potential.

In 2004 the Australian Breastfeeding Association (ABA) developed an Australian Breastfeeding Leadership Plan (ABLO) that recommended that 50% of Australian maternity units be BFHI accredited by 2008.

Currently there are 58 hospitals which are accredited in Australia out of approximately 500 hospitals providing maternity care. This means that only 26% of babies born in Australia are born in Baby Friendly-accredited hospitals.

The ABA report also recommended linking of public funding of maternity units to BFHI accreditation by 2014. (Fallon et al 2005, ABALP 2004). The Healthy Weight 2008 (National Obesity Taskforce 2003) also recommended that one of the health sector leadership actions would be to assist hospitals and health services to be accredited as 'Baby Friendly'. The Healthy Weight 2008 (National Obesity Task Force 2003) identified that there are many prongs in the fight against obesity. One very effective prevention measure is healthy eating – starting at birth with breastfeeding.

Currently the Baby Friendly Community Health Centre initiative is being developed and extended from the Baby Friendly Hospital Initiative. A 7-point plan has been developed using evidence from overseas experience both in content and implementation. Some modifications have been made to meet the Australian health care system setup. The aim is to continue to increase the initiation of breastfeeding through hospital accreditation, but to also focus on extending the duration rate of breastfeeding through accrediting all relevant non-hospital services that care for mothers of infants.

This community project aims to take up where the Baby Friendly Hospital Initiative finishes - at discharge from hospital. Again there will be written policies communicated to all staff. This, along with education of staff will allow for education of women and their support people so informed choices can be made about duration of breastfeeding and appropriate introduction of other foods (Baby Friendly Health Initiative 2007).

With the two Initiatives working together, the aim is to provide a seamless episode of healthcare for the consumer with consistent and evidence based advice and support for breastfeeding. The breastfeeding initiation **and** duration rates are increased due to increased education of healthcare workers in the hospital and in the community and through increased access to early support for new mothers, their infants and families. However, there is no funding for the community arm of the BFHI to be launched at the present time, as there is no government support and the extension to the BFHI is beyond the modest resources of the Australian College of Midwives.

Other initiatives which may have positive impacts on the duration of breastfeeding include expanding midwifery services to enable more midwives to work in a continuity of care model. This model sees the midwife care for a caseload of women and follow individual women through their pregnancy, birth and the postnatal period to six weeks. Evidence demonstrates that this model of care has numerous health benefits, one of which is that it enables education of women throughout the childbirth continuum about the benefits of breastfeeding, and provides timely support to women in the first 4-6 weeks of their parenting for breastfeeding (Enkin 2000; Hodnett 2000; Homer 2001). This increases the rate of successful breastfeeding. Currently in Australia less than 5% of women have access to this model of care, mostly in capital cities. In countries such as New Zealand this model is far more accessible with over 70% of women having access to this model of care (NZ Ministry of Health 1999). Access in Australia to maternal and child health services is also variable, and does not necessarily provide women with timely support to assist them to maintain breastfeeding and tackle any problems when they encounter them.

Another initiative is the **Core of Life** program. This is an education program for young people. It aims to address the realities of pregnancy, birth, breastfeeding and early parenting (Core of Life 2007). Research has shown that women approximately 50-70% of women make decisions regarding the method of infant feeding very early in pregnancy, if not prior to conception. The other factor in choice of infant feeding is partner support (Blyth et al 2004). Therefore programs, such as Core of Life, offering early access to factual breastfeeding information to all adolescents are vital.

Part E: Examine the effectiveness of current measures to promote breastfeeding.

There is a large bank of research demonstrating the effectiveness of the Baby Friendly Health initiative, where hospitals are accredited against the WHO/UNICEF *Tens Steps to Successful Breastfeeding*.

A study by Philip and Radford (2006) reported that in 1994 the Royal Oldham Hospital in Manchester UK had a 20% breastfeeding initiation rate and almost all had suppressed lactation by 4 weeks postpartum. The population of this area was 30% non-English speaking background. However with the introduction of Baby Friendly practices the initiation rates were raised to 58% by 1995, by 1999 the rate was 87%.

A landmark study by Kramer and colleagues in 2001 investigated the effects of BFHI on breastfeeding rates and infant morbidity in Belarus. The study was conducted as a randomized control trial – not something normally ethically possible with breastfeeding research. Data was obtained from 31 hospitals and involved 17,046 mother-infant pairs with data collected at 1, 2, 3, 6, 9 and 12 months. There was significant improvement in both breastfeeding rates and infant morbidity rates from the hospital assigned baby friendly practices.

Although the Australian College of Midwives is keen to see the Baby Friendly Community project expand, the reality is that the progress is slow. Due to the funding arrangement and the lack of Commonwealth support it is difficult to maintain the existing Hospital Initiative without considering the expansion into Community. There is a great deal of enthusiasm from the hospital and community sector for accreditation through this project and the concern is the ability to meet the demand in a timely fashion. As stated previously, most of the BFHI committee, educator and assessor workforce is volunteer; educators are not paid at all, and assessors are paid only a small honorarium for carrying out each assessment.

Unlike some overseas countries which have strong financial support from UNICEF or in the form of government grants, the funding in Australia is generated from within the project itself and in-kind support from the Australian College of Midwives. This severely restricts the rate at which this Initiative can grow. The interest in both hospital and community initiatives is increasing in line with State government support via policy changes and some limited financial assistance. The initiative is currently just managing to cover the workload within budgetary constraints.

Without some outside funding support the initiative will continue at a much slower than optimal rate and therefore not be able to reach targets set in various government and non-government recommendations.

Collection of national breastfeeding data remains problematic due to a lack of defined and standardized definitions that have not been integrated into practice across all Australian States. Whilst individual BFHI hospitals collect initiation data, it seems that this is rarely used as part of the State or National data collection systems.

The Australian College of Midwives is currently collecting some breastfeeding data via BFHI hospitals. However a recommendation would be to develop nationally consistent criteria for collection of such data. This should cover both the public and private sector and continue well into the second year of life. This would give meaningful data and comparisons for the rates of breastfeeding within Australia and compared to the rest of the world.

Another measure of effectiveness of the Baby Friendly Health Initiative is measuring the episodes of care for infants and young children presenting to a healthcare facility for preventable illnesses. Therefore the savings to the healthcare facility and indeed the whole healthcare system could be estimated. Again to be meaningful this would need to be uniform across Australia in both definition and data collection methods.

Part F: The impact of breastfeeding on the long term sustainability of Australia's health system.

The long-term sustainability of Australia's health system is being questioned (workforce evidence, cost inquiries etc). Much of the current focus is on treating the many preventable problems such as obesity and chronic diseases such as diabetes. Breastfeeding is one of the poorly recognised strategies for preventing health problems in Australia. By increasing not only the rate of initiation of breastfeeding in Australia, but its duration, there is the potential for substantial long term impacts on the Australian health system. Many of the preventable diseases so commonly seen in children, adolescents and even adults who were formula fed will be reduced with marked savings in both monetary and workforce terms for the health care system.

The focus for the health care systems needs to be moving from an emphasis on treating the ill to a health promotion model of care which aids the long-term sustainability of the healthcare system.

The impact of increased rates of breastfeeding is difficult to cost out. However there is evidence as to the costs of formula feeding. IBFAN 1998 determined total cost for hospital treatment of formula fed infants during the first four months of life is 15.4 times more expensive than breastfed infants.

One recent study estimated that the hospital costs associated with early weaning for the ACT at approximately \$1-2 million per year. This was based on 5 illnesses – gastrointestinal illness, lower respiratory tract infections, otitis media (ear infections), eczema and necrotizing enterocolitis. NSW health estimates costs of not breastfeeding or short breastfeeding duration as \$20-\$40 million/year (NSW Health 2004).

Looking overseas, the US Healthy people 2010 breastfeeding goals include 75% mothers initiating breastfeeding, 50% still breastfeeding at 6 months and 25% continuing at 1 year. The estimated benefit to the health system of reaching these targets is a saving of \$US 3.6 billion per year from treating otitis media, gastroenteritis and NEC alone. (Philip & Radford 2006). The prospect of comparable savings in Australia is certainly incentive to improve both initiation and duration rates of breastfeeding.

The impact of improved initiation and duration of breastfeeding on the long term sustainability of Australia's health system may be immense and should not be underestimated.

The importance of Human Milk Banks for babies where own mother's milk is unavailable is a health choice that should never be underestimated. Drane (1997) estimated that a minimum of \$8.5 million/ year could be saved (population 18 million) if the prevalence of exclusive breastfeeding at 3 months was increased from 60 to 70 percent. In 1994, Oshaug & Botten (cited in Akre 2006) estimated that the human milk banks in Norway had a market value of around \$US2.2 billion (population 4.3 million). Infant formula should be third choice – for 'emergency use only'. It is imperative that human milk banks be set up in all Australian capital cities and regional areas.

The Healthy Weight 2008 (2003) paper identified that overweight and obesity were the major cause of preventable health problems in Australia. Also identified was that the true financial cost of obesity and associated illnesses would be in the vicinity of \$1.3 billion per year and rising (National Obesity Task Force 2003).

Savings are not only in the healthcare sector, but also flow into other areas. For example a formula-fed infant who has recurrent otitis media may have hearing difficulties – maybe even leading to permanent problems. Speech, learning and development difficulties can follow on potentially leading to the need for remedial education, or a constant under-achievement throughout the whole of life. This under-achievement and low self esteem can lead to poor life choices; potentially leading to a cycle of disadvantage beginning, or being exacerbated. This spirals back to increased costs to the health budget in later life, in areas such as mental health, chronic illness, less than optimal health and parenting choices for their children.

Conclusion:

- Breastfeeding has significant health benefits for mother and infant, with flow-on effects for improved health in later years.
- Benefits of breastfeeding increase in direct proportion to length of time the infant is sustained exclusively by breastfeeding.
- The Baby Friendly Health Initiative, comprising Baby Friendly Hospital and Baby Friendly Community programmes, is Australia's key undertaking to support the WHO/UNICEF commitment to promoting breastfeeding.
- There are demonstrable benefits and savings to the wider health budget from establishing sound foundations in life by promoting and supporting breastfeeding.
- There continues to be very strong supporting evidence that breast milk provides optimal nutrition for infants and young children. Therefore human breast milk should be available to all infants/young children regardless of circumstance, whether it is obtained from the mother or through human milk banks.

References

- Australian Breastfeeding Association (2004) *Breastfeeding Leadership Plan*
- Akre, James (2006) *The Problem with Breastfeeding: a personal reflection*. Hale Publishing Texas
- Allen, Jane & Hector, Debra (2005) *Benefits of Breastfeeding* NSW Health Public Health Bulletin 16 (3-4) pp 42-46
- APMAIF - The Advisory Panel on the Marketing in Australia of Infant Formula (date unknown) *The MAIF Agreement: What is it and what does it mean for you?* Department of Health and Ageing
- Baby Friendly Health Initiative (2007) *The Seven Point Plan Practice outcome Indicators (DRAFT)* Australian College of Midwives Canberra
- Blyth, Rosemary J; Creedy, Debra K; Dennis, Cindy-Lee; Moyle, Wendy; Pratt, Jan; DeVries, Susan M and Healy Genevieve N (2004) *Breastfeeding /duration in an Australian Population: The Influence of Modifiable Antenatal Factors*, Journal of Human Lactation Vol 20 pp30-38
- Centre for Attachment (2007) Feeding and Attachment www.centreforattachment.com , accessed 10.01.07
- Core of Life website - www.coreoflife.org, accessed 22.2.07
- Drane, D (1997) *Breastfeeding and Formula Feeding: a preliminary economic analysis*, Breastfeeding Review Vol. 15 No 1 pp 7 – 15
- Enkin M, Keirse JNC, Neilson J, Crowther C, Duley L, Hodnett E, Hofmeyr J. 2000 *A Guide to Effective Care in Pregnancy and Childbirth*. 3rd Ed. Oxford. OUP <http://maternitywise.org/guide/about.html>
- Gagnon, Anita; Leduc, Guylaine; Waghorn, Kathy; Yang, Hong; Platt, Robert (2005) *In-hospital formula supplementation of healthy breastfeeding newborns*, Journal of Human Lactation Vol 21 No 4 pp 397- 408
- Hodnett ED. Continuity of caregivers for care during pregnancy and childbirth. Cochrane Database Syst Rev 2000
- Homer CS, Davis GK, Brodie, P.M.; Sheehan, A.; Barclay, L.M.; Wills ,J.; Chapman ,M.G. *Collaboration in maternity care: a randomised controlled trial comparing community-based continuity of care with standard hospital care*. BJOG 2001; 108(1) pp 16-22
- Howard, Cynthia; Howard, Fred; Lawrence, Ruth; Andresen, Elena; DeBlied and Weitzman, Michael (2000) *Office Prenatal Formula Advertising and Its Effect on Breastfeeding Patterns*, Obstetrics & Gynaecology Vol 95 No 2 pp 296 – 303
- Lording, Roslyn (2006) *A Review of human milk banking and public health policy in Australia*. Breastfeeding Review Vol 14 No 3 November 2006 p21 – 30
- McGuire, Elizabeth (2006) *Marketing Artificial Baby Milk in Australia* Lactation Resource Centre, Australia No 23 Nov 2006
- National Obesity Task Force (2003) *Healthy Weight 2008; the National Agenda for Children and Young People and Their Families* Commonwealth of Australia
- Ministry of Health. *Report on Maternity 1999*. Wellington, New Zealand. <http://www.moh.govt.nz>

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NSW Health (2005) *Report on Breastfeeding in New South Wales 2004* Commonwealth of Australia

NSW Health (2006) *National Clinical Guidelines for the Management of drug use during pregnancy, Birth and the early development years of the newborn* Commonwealth of Australia (commissioned by the Ministerial Council on Drug Strategy)

NHMRC (2003) *Dietary Guidelines for Children and Adolescents in Australia incorporating the infant feeding guidelines for health workers*, Commonwealth of Australia

Oddy, Wendy (2006) *Fatty Acid Nutrition, Immune and Mental Health development through Childhood* in; Huang, Julie (ed) (2006) *Frontiers in Nutrition Research* Nova Science Publishers, Inc pp 177-211

Philipp, BL & Radford, A (2006) *Baby Friendly: a snappy slogan or standard of care?* *Arch Dis Child Foetal Neonatal Ed* 2006 91 F145-149

Queensland Health (2003) *Optimal Infant Nutrition: evidence based guidelines 2003 – 2008*. Queensland Government/Queensland Health

Riordan, Jan (2005) *Breastfeeding & Human Lactation* 3rd Edition, Jones & Bartlett Publishers, USA

Telethon Institute for Child Health Research (2006) *Media release – New research reveals breastfeeding boosts mental health* 27th Oct 2006 www.ichr.uwa.edu.au/news/news.lasso?id=213 accessed 22.2.07

Walker, Marsha (1993) *A Fresh Look at the Risks of Artificial Infant Feeding* *Journal of Human Lactation*, Vol 9 No 2 pp 97 – 107

Wood, Kathryn; Mortenson, Kate & Endacott, Hilary (2003) *Breastfeeding and Obesity* Hot Topic Number 14 November 2003, Lactation Resource Centre

World Health Organization (1998) *Evidence for the ten steps to successful breastfeeding (Revised)*, Division of Child Health and Development, Geneva

Zubrich, SR; Lawrence, DM; Silburn, SR; Blair, E; Milroy, H; Wilkes, T; Eades, SJ; D'Antoine, H; Read, AW; Ishiguchi, P; Doyle, S (2004) *The Western Australian Aboriginal Child Health Survey: The Health of Aboriginal Children and Young People*