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Breastfeeding submission: Prof. Colin Binns

House Standing Committee on Health and Ageing

Inquiry into Breastfeeding

Submission by:

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Australia is one of the leading Western countries in the promotion of breastfeeding. From a low point of 50-60% initiating breastfeeding in the 1960's we are now have in excess of 90% of mothers initiating breastfeeding. The programs of the Australian Government in promoting breastfeeding (the Breastfeeding Initiative, the MAIF agreement, the Dietary Guidelines and the Infant Feeding Guidelines etc), the health promotion and community nursing programs of state governments and the work of voluntary organisations (the Australian Breastfeeding Association) have contributed to this major achievement. However the duration of breastfeeding, and in particular exclusive breastfeeding, has changed little over the past three decades. In the 1970's about 50% of mothers breastfed until six months and the figure is still the same today. Efforts should now be focused on extending the duration of breastfeeding, and in particular extending exclusive breastfeeding to around six months of age.

A. The extent of the health benefits of breastfeeding;

I suggest that the committee, change the way that this term of reference is expressed. Breastfeeding should be regarded as the normal way to feed all the importance. It is more helpful to think about the hazards of not breast-feeding rather than the benefits of breastfeeding.

I believe that Australia is fortunate in having a comprehensive review of in and feeding in the form of the National Health and Medical Research Council Infant Feeding Guidelines for Health Workers, which were last reviewed in 2003 (1). Most of the information included in those guidelines is still current. One area of considerable interest in the last few years has been the development of the obesity epidemic in Australia. I believe that breast-feeding is one of the most effective public health interventions available to us, to prevent childhood and later adult obesity. Here are my comments on the prevention of obesity through breastfeeding:

Association between breast-feeding and obesity.

There have now been four systematic reviews published which have included 340,000 subjects from a total of 48 papers, all of which have been observational studies (2). Observational studies must be used for research on breastfeeding because it would be completely unethical and experimentally very difficult to undertake a randomized controlled trial. The consensus is that breastfeeding has a definite protective effect against obesity (Odds ratio 0.68-0.93). The odds ratio may be small, but the

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preventable fraction, or population attributable risk, is very large because of the high prevalence of breastfeeding in the community. The size of the effect depends on the exclusivity and the duration of breastfeeding. This accumulation evidence, even though it is from observational studies is more than sufficient justification to implement a major public health promotion campaign for breastfeeding.

The possible mechanisms of action may include:

1. Breastmilk has the ideal balance of nutrients, unlike infant formula (an excess amount of calories may program an increased number of cells in adipose tissue.)
2. Breastmilk helps program appetite (leptins)
3. Breastfeeding on demand helps babies to learn to regulate their own appetite.
4. Breastfeeding helps establish a more relaxed mother-child attitude to feeding.
5. Breastfed babies have a lower growth velocity and grow into a leaner body shape. (Formula fed babies have an earlier adiposity rebound)

Recent reviews on the subject of the protective role of breastfeeding against obesity include the publications by Dietz, Harder and Owen (3-6). As our own chapter on obesity may not be readily available, I have appended a copy to the submission (7).

Through increasing breastfeeding rates in Australia the future rates of obesity in Australia will be reduced. A recent publication from the UK presents a more comprehensive way of calculating the benefits to be realised in the future from reducing asthma and obesity as a result of breastfeeding (8). Similar calculations could be done for Australia as we have sufficient data available.

It should be noted that the health benefits of breastfeeding are at a maximum in the first months. It is much more important to promote exclusive breastfeeding for the first six months of an infant's life, than to promote prolonged breastfeeding beyond say 12 months of age.

B. Evaluate the impact of marketing of breast milk substitutes on breastfeeding rates and, in particular, in disadvantaged, indigenous and remote communities.

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In countries where breastmilk substitutes are widely advertised and samples are given to new mothers, breastfeeding rates are much lower than they are in Australia. A good example is the current situation in South Korea, a country that declined to sign the WHO Code on the Marketing of Breastmilk Substitutes. It is most important for the health of Australians than the current policy restricting the advertising of infant formula is maintained and strengthened. One weakness of the current code is the extensive advertising of 'follow-on formula' for infants over the age of 12 months which occurs on television and in the print media. Most of these products use names that are similar to formula designed for use under the age of 12 months. Hence by advertising the follow-on formula on television and in magazines, the name of the product is kept constantly before young mothers. A recent advertising campaign by the manufacturers of S26 follow-on formula used a baby model that could easily be confused with a young infant rather than a two-year-old child.

There is however one downside to the ban on advertising. More recently developed formulae, usually referred to as "gold products", contain nutrients which are of value to young infants. Yet most infants are not using "Gold Products". The percentage of mothers using 'Gold' products in the **Perth Infant Feeding Study II** is shown in Table 1(9). The percentage ranged from a high of 30% for young infants falling to 17% at the end of the first year of life. Ideally all infants should be breastfed, but where that does not occur the premium infant formulae (gold products) should be used to give all infants the benefits of LCPUFA's, nucleotides etc.

This may be due to price or it may be due to a lack of knowledge on the part of mothers. Some mechanism needs to be found to increase the use of gold products and reduce the use of the older standard products. This could be a function of the NHMRC through the Infant Feeding Guidelines or it could be done through APMAIF. It would be unwise to rescind the MAIF agreement as this is one of the most effective breastfeeding promotion strategies in the western world. .

The comments in the Infant Feeding Guidelines on specialist formulae need to be followed – there is little need for the use of products such as soy or goat's milk based formulae (1).

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Recently another company, Bayer HealthCare, has begun to market infant formula in Australia. It has products that claim to specifically target colic, constipation, diarrhoea and even one for “hungry and sleepless” babies. These products would appear to violate Australian food regulations by making these health claims on their labels. Products such as these should be marketed as therapeutic goods and should be under the control of the TGA. Before being licensed in Australia the company should be required to produce appropriate evidence from randomised controlled trials.

In the Perth Aboriginal Breastfeeding Study the rates of breastfeeding for indigenous mothers were higher than for other Australians (10). However the trends for some indigenous groups appear to be unfavourable, particularly young mothers and mothers who are older and already have number of children. When indigenous mothers introduce infant formula it is almost always chosen on the basis of price and “gold formulae” are rarely used. Indigenous mothers are more likely to introduce unmodified cow’s milk before 12 months of age.

Table 1 Infant formula products used in the Perth Infant Feeding Study II (9)

Weeks	4	10	16	22	32	40	52
Standard	58.8	57.7	60.7	56.6	22.7	15.4	12.1
Gold'	30.9	29.7	26.0	18.3	1.2	0.0	0.8
Special	6.5	8.7	10.1	9.8	4.4	4.4	4.7
Goat	0.4	1.0	1.3	1.2	0.0	0.0	0.0
Soy	2.3	1.4	1.3	1.2	1.5	1.5	2.0
Follow on standard	0.4	0.3	0.3	8.3	49.3	56.5	58.6
Follow on 'Gold'	0.0	0.0	0.0	3.4	17.5	18.6	16.4
Don't know	0.8	0.7	0.0	0.0	0.0	0.0	0.0
Evap Milk	0.0	0.3	0.3	0.0	0.0	0.0	0.0
Cow's milk	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Follow on Soy	0.0	0.0	0.0	0.6	2.6	2.7	4.3
Follow on Goat	0.0	0.0	0.0	0.3	0.9	0.9	1.2
Percentage 'Gold' products	30.9	29.7	26.0	21.7	18.7	18.6	17.2

Use of Cow's milk. Cow's milk should not be used under the age of 12 months (except in small amounts) due to its low iron content and the risk of bleeding from the gastro-intestinal tract. The use of cow's milk is common in Australia as detailed in the attached paper (11). By 32 weeks about 20% of infants have had cow's milk and this proportion doubles by 40 weeks. Unmodified cow's milk should not be used before 12 months, but breastmilk, infant formula should be used instead.

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

The NHMRC Infant feeding Guidelines set a target of 80% of Australian infants being exclusive (or fully) breastfed. If this target is reached Australia could expect significant public health benefits. See Children's Dietary Guidelines P5ff and Infant Feeding Guidelines (1). This would result in reduced costs of medical services to infants and later in life a reduction in the burden of chronic disease. It has been said that this generation of children may be the first generation to have a lower life expectancy than their parents. Increasing the rate of breastfeeding is an effective strategy to ensure that this does not happen.

D. Initiatives to encourage breastfeeding;

See Children's Dietary Guidelines P9 and Infant Feeding Guidelines P329 and our recent publications (1, 12-16).

These papers give details of the factors that influence breastfeeding initiation and duration. However it needs to be noted that there is a marked lack of good intervention trials to promote the increased duration of breastfeeding in Australia. It is important that funds be made available for several trials of health promotion interventions to improve duration.

At the present time evidence would suggest the following be continued:

1. Continue the MAIF agreement and restrict the commercial promotion of infant formula.
2. Extend the MAIF agreement to retail promotion and the advertising and promotion of infant feeding bottles and teats.

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3. Promote Baby Friendly Hospitals and prohibit the distribution of commercial packs to mothers that contain infant formula samples.

3. All around Australia support for newly discharged mothers through community nursing services has been reduced. Mothers need to be visited within a few days of discharge and need to have access to ready advice on breastfeeding whenever they need it. This intervention is the subject of a Cochrane review (17).

4. Educate all health workers to include breastfeeding as one of the first items of discussion in antenatal care. Our research has consistently shown that the earlier the decision to breastfeed is made the more likely a mother is to begin breastfeeding and to breastfeed for longer.

Infant Growth Charts.

The growth of infants is the most important index of health and nutrition. Regular weighing is a part of routine assessment. Recently the WHO has proposed the use of a new set of growth references. However these were based on a highly selected sample (top 5% or so). If Australia switches to these new standards it may discourage mothers from continuing to breastfeed (18).

E. Examine the effectiveness of current measures to promote breastfeeding; and

Many Australian mothers are now on "early discharge" programs following delivery. All Australian state health systems have reduced their expenditure on community nursing programs and community support. From being a world leader in the provision of MCH services we are now well behind best practice.

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

See section C.

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Appendices

Please enter the Appendixes for subject copyright and should be published on the Website

Binns C, Graham K, Oddy W, Scott J. Infants who drink cow's milk: a cohort study. *J Paed & Child Health* 2007;(accepted for publication, 1/12/2006)

Oddy W, Scott J, Binns C. The role of infant feeding in overweight young children. In: Flamenbaum R, editor. *Childhood Obesity and Health Research*. New York: Nova Science Publishers; 2006. p. 111-133.

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