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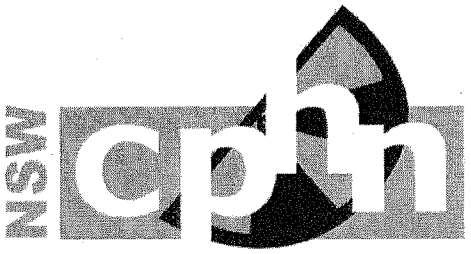

NSW Centre for Public Health Nutrition

Secretary of the Standing Committee
on Health and Ageing
Parliament House
PO Box 6021
Parliament House
CANBERRA ACT 2600

Tuesday 27 February 2007

Dear Committee Members

Re. Inquiry into Breastfeeding

Please accept this submission from the NSW Centre for Public Health Nutrition (CPHN). The CPHN was established in 2000 as an initiative of the NSW Health Department, in collaboration with the Sydney University Nutrition Research Foundation. It comprises a small team of public health professionals with specialist expertise in nutritional epidemiology, evidence-based intervention planning and applied nutrition research.

Breastfeeding is one of the priority areas of research for our Centre and the extent of our work in this area is detailed below, in support of the terms of reference of this inquiry.

The CPHN supports the government in its endeavours and asks that the **committee considers**:

- the **reports and papers produced by the Centre** (e.g. reports on the evidence base for interventions, the editorial and papers in the special edition of the NSW Public Health Bulletin);
- the **extensive evidence for the health benefits** of breastfeeding including examples of **more recent evidence** for the health benefits of breastfeeding;
- how these health benefits translate into **considerable cost savings** to the Australian Health Care system;
- how **targeting of breastfeeding efforts** will contribute to equity in disadvantaged groups; and,
- the need to **conduct research** into interventions that relate to the wider determinants of breastfeeding (beyond the individual), and to regularly update the continually emerging evidence base for interventions research.

Also,

- The CPHN considers that there is a fundamental need for **monitoring of breastfeeding** *in population sub-groups at the national (and state level) and* that this be under the coordination of a national food and nutrition monitoring group within a national health data monitoring agency, e.g. AIHW. Such a group would liaise with health survey groups e.g. the ABS, and States and Territories, to standardise survey questions and methods to track what is happening with breastfeeding practices in Australia.

- The CPHN considers that there is an overriding need for national action on breastfeeding in Australia, particularly:
  - establishment of a **nutrition monitoring system in Australia** which includes the responsibility for coordination of efforts to monitor breastfeeding practices in relation to NHMRC recommended practices, as outlined above;
  - re-invigoration of efforts to promote hospital practices in line with the **WHO Baby Friendly Hospital Initiative** (BFHI). This would include the development of nationally agreed indicators and a system to monitor hospital improvements to practices;
  - support for the **national coordination and extension of the BFHI into community and paediatric health services**
  - continue to **update and disseminate infant feeding guidelines** widely and in a timely manner, in relation to new evidence and developments;
  - **increased investment in research and evaluation** of public health actions that can be taken to promote and support breastfeeding
  - **co-ordination and collaboration** with states and territories, *professional societies, and non government organisations to:* a) **disseminate research evidence** concerning the benefits of breastfeeding and the effectiveness of various approaches to supporting and promoting breastfeeding, and, b) **support evidence-based planning and implementation** of public health actions that can be taken to promote and protect breastfeeding.

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Yours sincerely

Karen Webb (Co-Director)

on behalf of:
Debra Hector, PhD MPH
Karen Webb PhD
Vicki Flood PhD
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CPHN'S WORK ON BREASTFEEDING

Breastfeeding is included as a public health nutrition priority in a number of policies and documents, including Eat Well NSW and Eat Well Australia 2000-2010 and is a priority area of research within the CPHN.

Reports on breastfeeding

CPHN, in association with NSW Health, has produced a number of monitoring and evidence-based intervention planning reports on breastfeeding.

- King L, Hector D, Webb K. (2005) *Promoting and Supporting Breastfeeding in NSW: Case Studies*. Report prepared for the NSW Centre for Public Health Nutrition and NSW Health Department.

- Hector D, King L, Webb K. (2004) *Overview of Recent Reviews of Interventions to Promote and Support Breastfeeding.* Report prepared for the NSW Centre for Public Health Nutrition and NSW Health Department.

- Hector D, Webb K, Lymer S. (2004) *Report on Breastfeeding in NSW: 2004*. Report prepared for the State of Food and Nutrition in NSW Series: NSW Centre for Public Health Nutrition and NSW Health Department.

- Webb K, Marks GC, Lund-Adams M, Rutishauser IHE, Abraham B. (2001) '*Towards a national system for monitoring breastfeeding in Australia: Recommendations for population indicators, definitions, and next steps*' – published as part of the National Food and Nutrition Monitoring and Surveillance Project, funded by the Commonwealth Department of Health and Aged Care.

NSW Health Breastfeeding Policy

These reports formed the basis of the NSW Health Breastfeeding Policy, released in 2006 (PD 2006_12; NSW Department of Health 2006). Dr Debra Hector (Research Fellow, CPHN) was a member of the working party which developed the NSW Health Breastfeeding Policy.

NSW Public Health Bulletin Special Edition on Breastfeeding

Dr Karen Webb (Co-Director, CPHN) was the senior editor of, and co-author of several papers within, a special edition of the NSW Public Health Bulletin (Vol 16 (3-4): March-April 2005) on 'Breastfeeding and the Public's Health'. This special edition on breastfeeding was produced to support the NSW Health Breastfeeding Project:

- a guest editorial that outlines the public health importance of breastfeeding (Webb, Stickney, Heywood)
- an overview of the evidence for the benefits of breastfeeding in countries like Australia (Allen, Hector)
- an overview of, and the evidence base for, potential interventions to promote breastfeeding (Hector, King)

- an article describing the development of a conceptual model that can be used to interpret the factors that affect the capacity of women to breastfeed (Hector, King, Webb, Heywood)
- a description of breastfeeding practices in NSW, based on the results from the NSW Child Health Survey, 2001 (Hector, Webb, Lymer)
- an article describing the NSW Health Breastfeeding Project (Macoun)
- a description of the Baby Friendly Hospital Initiative, with a case study of the Royal Hospital for Women, in Sydney, which is accredited as a Baby Friendly hospital (Heads)
- an article describing the WHO Code of Marketing of Breastmilk Substitutes and how Australia is meeting its responsibilities to the Code (McVeagh)

The special edition on breastfeeding is attached at the end of this submission.

THE EXTENT OF THE HEALTH BENEFITS OF BREASTFEEDING

- ✓ Evidence suggests that there are many health benefits and advantages of breastfeeding at all stages of life

- ✓ The evidence is frequently reported in systematic reviews and meta-analyses. (See paper by Allen and Hector (2005) Benefits of breastfeeding. NSW Public Health Bulletin 16(3-4): 42-46)

- ✓ The evidence continues to accumulate. For example:

Breastfeeding is protective against chronic disease, including obesity and diabetes, in childhood and adulthood, e.g.

- o A meta-analysis of published evidence has shown that breastfeeding in infancy is associated with a reduced risk of type 2 diabetes, with marginally lower insulin concentrations in later life, and with lower blood glucose and serum insulin concentrations in infancy (Owen et al 2006).

Dose-response (i.e. longer breastfeeding associated with increased health benefits) effect is reported particularly for the protective effect of breastfeeding against breast cancer:

- o Average duration of breast-feeding of 11-12 months reduced risk of breast cancer by 54% compared to 1-4 months of breastfeeding. Longer duration of breastfeeding important (Kim et al 2006).

- o Strong dose-response relationship observed for longer duration of breastfeeding. Breastfeeding is one of the few potentially modifiable risk factors for breast cancer and is an important factor in decreasing risk among older parous post-menopausal women (Shantakumar et al 2006).

Breastmilk has a number of immunological properties that can not be replicated in infant formula. These properties protect the infant against infection. For example, the evidence is extensive for protection against respiratory tract infections:

- o This is a review of the immunologic activities and protective benefits of human breast milk against infection. It details important concepts about the developing immunity of infants, bioactive factors and antiinflammatory properties of breast milk, intestinal microflora in infants, probiotics and prebiotics, and the dynamic interactive effects of breast milk on the developing infant. Studies documenting the protective effect of breast milk against various infectious diseases in infants are presented, including respiratory infections, diarrhea, otitis media, and infections in premature infants. Data are provided supporting the current recommendations of 6-months duration of exclusive breastfeeding for all infants in the United States and 12 months worldwide. Concepts related to the role breastfeeding plays in the normal development of the infant's immune system and the protection afforded the infant against infectious diseases during infancy and childhood, while the infant's immune system is still maturing.

The discussion provides ample evidence to support the current recommendations for 6 months of exclusive breastfeeding for all infants, help all health care providers adequately inform families of the real immune benefits of breastfeeding, and strongly support and advocate for breastfeeding in their day-to-day care of children. [Lawrence and Pane 2007]

- The positive association between a short duration of both total and exclusive breastfeeding, as well as an early introduction of formula, and positivity for beta-cell autoantibodies modifies the risk of beta-cell autoimmunity, even years after finishing breastfeeding (Holmberg et al 2007).

- This nationally representative study documents increased risk of respiratory tract infection including pneumonia and recurrent otitis media in children who were fully breastfed for 4 versus 6 months. These findings support current recommendations that infants receive only breast milk for the first 6 months of life. [Chantry et al 2006]

Some other beneficial health effects of breastfeeding:

- Our results suggest that the protective effect of breastfeeding on the attainment of gross motor milestones is attributable to some component(s) of breast milk or feature of breastfeeding and is not simply a product of advantaged social position, education (Sacker et al 2006).

- In this study, premature children and those who did not breast-feed could be considered at risk for developing defects in tooth enamel (Lunardelli and Peres 2006).

- Breast feeding was associated with upward social mobility. Confounding by other measured childhood predictors of social class in adulthood did not explain this effect (Martin et al 2007).

- Exclusive breastfeeding may mitigate or delay symptomatic celiac disease (Chertok 2007).

THE POTENTIAL SHORT AND LONG TERM IMPACT ON THE HEALTH OF AUSTRALIANS OF INCREASING THE RATE OF BREASTFEEDING
and
THE IMPACT OF THE BREASTFEEDING ON THE LONG TERM SUSTAINABILITY OF AUSTRALIA'S HEALTH SYSTEM

✓ Breastfeeding has been consistently shown to be protective against a large range of immediate and longer term health outcomes that are a significant burden on individuals, the health system and society. While some of the positive effects of breastfeeding on particular health outcomes may be small, these differences are extremely important at the population level. Taken together with the numerous health outcomes where the effect is pronounced, the overall benefits of breastfeeding are likely to be considerable. (Allen and Hector 2005)

Rates of hospitalisation drastically reduced in infants fully breastfed:

- 100% of full breastfeeding among 4-month-old infants would avoid 56% of hospital admissions in infants who are younger than 1 year. CONCLUSIONS: On the basis of the present data, we conclude that full breastfeeding would lower the risk for hospital admission as a result of infections among infants who are younger than 1 year within an industrialized country. [Paricio Talayero et al 2006]

- Breastfeeding was protective against hospitalization for rotavirus AGE for infants <6 months of age (odds ratio 5.1, 95% CI 1.2-13.2) (Dennehy et al 2006).

- The associations between maternal breastfeeding for 4 months or more and both hospitalizations before 5 months of age and chronic diseases are independent of family income level. Interventions intended to promote and support breastfeeding should especially target mothers living in poverty conditions. [Coulibaly et al 2006]

Reduced rates of hospitalisation lead to reduced health care costs:

- Infants fully breastfed at three months had 4.90 episodes of illness requiring ambulatory care and 0.10 hospital admissions per infant/year compared with 6.02 and 0.17, respectively, in infants not or not fully breastfed. They had also a lower cost of health care: 34.69 euro versus 54.59 per infant/year for ambulatory care, and 133.53 euro versus 254.03 per infant/year for hospital care. Cost of health care decreased with each extra month of breastfeeding. CONCLUSION: Lack of breastfeeding and higher use and cost of health care are significantly associated. [Cattaneo et al 2006]

Economic Benefits of Improved Breastfeeding Practices (From Allen And Hector 2005)

"The illnesses for which there is convincing evidence of a protective effect of breastfeeding are among the major health problems in Australia and contribute significantly to the health burden. However, research into the costs and benefits of breastfeeding is poorly developed.

Most economic analyses of breastfeeding have focused on a small number of infant illnesses and thus considerably underestimate the total costs resulting from low rates of breastfeeding. These analyses also focus on the infant period alone, and exclude many infant and maternal illnesses, as well as the costs of increased rates of longer term chronic diseases.

Many of the potential costs are currently unquantified and difficult to measure; consequently analyses commonly measure direct health costs. Indirect costs (for example, cost of infant formula, equipment, storage and preparation; cost of medicine and staff time for treating sick infants), and out-of-hospital costs to the health system (for example, physician visits) are seldom measured (Smith et al 2002; Drane 1997).

An alternative way of approaching breastfeeding in economic analysis has been to consider breastmilk as a food commodity that contributes to the total food supply (and therefore the Gross Domestic Product). In a novel analysis, breastmilk was considered to yield a net economic benefit (after adjustment for a small increase in maternal food consumption) of a minimum of $2.2 billion each year in Australia (Smith 1999; Smith & Ingham 2001)."

Target groups for breastfeeding support

- Rates of breastfeeding are consistently reported as being lower in younger mothers (less than 25 years), those less well-educated (less than tertiary education) and lower SES.

- Aboriginal and Torres Strait Islanders
  Data on the extent of breastfeeding in this population sub-group are lacking. Rates are likely to vary depending on rural, remote or urban setting.

  Aboriginal and Torres Strait Islanders are disadvantaged in many parts of society and suffer from much higher rates of morbidity and mortality than the Australian population overall. As breastfeeding is protective against a large number of infectious and chronic diseases, then breastfeeding should be particularly encouraged, promoted and supported in this population sub-group as it will result in substantial benefits to the health care system.

  For example, rates of recurrent otitis media in Aboriginal children are ten times higher than in the general population. The evidence that breastfeeding protects against otitis media is irrefutable. Recurrent otitis media leads to hearing problems in children which leads to learning difficulties - perpetuating the social, health and well-being problems for Indigenous people.

Similarly, rates of diabetes and other chronic disease is considerably higher in Aboriginal and Torres Strait Islander people, and the evidence that breastfeeding is protective against these longer-term poor health outcomes continues to accumulate.

- Mothers who are overweight or obese pre-pregnancy are less likely to breastfeed, and as breastfeeding is shown to be protective against overweight and obesity and children of mothers who are overweight are ten times more likely to be overweight, mothers who are overweight or obese pre-pregnancy may need specific support to enable successful breastfeeding

  - Pre-pregnancy body mass index is associated with reduced breastfeeding duration, and mothers who are overweight or obese before pregnancy tend to breastfeed their infants for a shorter duration than normal weight mothers independent of maternal socioeconomic and demographic characteristics (Oddy et al 2006).

- It is likely that there are other population sub-groups (such as particular ethnic minorities) not identified due to lack of information on breastfeeding rates in particular population sub-groups.

EXAMINING THE EFFECTIVENESS OF CURRENT MEASURES TO PROMOTE BREASTFEEDING

1. EVIDENCE-BASED INTERVENTIONS

Summary: The evidence for effectiveness of interventions at the individual level (education and support) and in hospital services (Baby Friendly Hospital Initiative) is strong. Evidence is lacking for the effectiveness of interventions that address the wider determinants of breastfeeding.

CPHN conducted a review of the evidence (from systematic reviews) of interventions to promote, encourage and support breastfeeding (Hector et al 2004; Hector and King 2005)

- Hector D, King L. (2005) Interventions to encourage and support breastfeeding. NSW Public Health Bulletin 16(3-4): 56-61
- Hector D, King L, Webb K. (2004) *Overview of Recent Reviews of Interventions to Promote and Support Breastfeeding.* Report prepared for the NSW Centre for Public Health Nutrition and NSW Health Department – this report summarised the evidence from 9 different systematic reviews of the evidence surrounding breastfeeding interventions.
- King L, Hector D, Webb K. (2005) *Promoting and Supporting Breastfeeding in NSW: Case Studies*. Report prepared for the NSW Centre for Public Health Nutrition and NSW Health Department – this report was produced to provide a practice guide for effective or promising interventions.

There is strong evidence for the effectiveness of interventions to promote, protect and support breastfeeding that are aimed at the individual mother – mainly education (although not written information alone, which can be detrimental) and one-to-one support. Evidence is also strong for the effectiveness of interventions at the hospital services level – specifically the Baby Friendly Hospital Initiative (BFHI). (Hector and King 2005). Full implementation of the BF Hospital Initiative *alone* is unlikely to be effective in increasing breastfeeding duration (Bartington et al 2006; Pincombe et al 2006).

There is a lack of evidence internationally and in Australia surrounding the effectiveness of interventions to address the home, community, societal and environmental level determinants of breastfeeding behaviours – in other words, those interventions that provide support for the breastfeeding mother once she has left the hospital.

More recent review and practice evidence since the CPHN review:

- Britton C, McCormick FM, Renfrew MJ, Wade A, King SE. Support for breastfeeding mothers. *Cochrane Database of Systematic Reviews* 2007, Issue 1. Art. No.: CD001141. DOI: 10.1002/14651858.CD001141.pub3. [Updated November 2006]
- The effectiveness of public health interventions to promote the duration of breastfeeding. Systematic review. National Institute for Health and Clinical Evidence
  http://www.nice.org.uk/page.aspx?o=511623 Part 1

http://www.nice.org.uk/page.aspx?o=511625 Part 2

- The CDC guide to breastfeeding interventions (http://www.cdc.gov/breastfeeding/resources/guide.htm)

2. Need for routine monitoring of breastfeeding at the population level

Summary: There has been no systematic approach to the monitoring of *breastfeeding in Australia, and no follow-up to the AFNMU report in 2001.* Coordinated national and state-level monitoring of breastfeeding in different population subgroups needs to occur on a routine basis (using consensus survey, analytical and interpretative methods)

- The effectiveness of current measures to promote breastfeeding requires regular information about how population breastfeeding practices align with those recommended by health authorities such as the NHMRC, and how breastfeeding practices are changing over time among various population sub-groups such as young mothers, those socioeconomically disadvantaged, those living in rural areas, etc. Such information is needed to identify which breastfeeding behaviours and population groups, in particular, that/who need to be more effectively targeted in public health measures to promote breastfeeding.

- International best practice indicates that routine monitoring and surveillance of breastfeeding is required to provide the data necessary for rational planning of health services as outlined above. Best practice regarding monitoring includes the use of standardized definitions and indicators of breastfeeding practices, and appropriate measurement methods, including standardized survey questions in population health surveys.

- In 2001, the Commonwealth Dept of Health and Aged Care published a report they commissioned from the Australian Food and Nutrition Monitoring Unit, which identified the ad hoc approach to monitoring breastfeeding practices in Australia and the need for a systematic approach to provide this important information for health workers, policy makers, and those planning families. The report recommended use of standardized definitions and methods adapted from WHO. A series of next steps were outlined to implement the systematic approach, including the establishment of a coordinating body/process to seek commitment, consistency and rigour in monitoring breastfeeding practices in Australia. Emphasis was placed on working with ABS regarding standardized questions and data analysis methods for the National Health Surveys to report on the nationally agreed indicators, and also working with state CATI health survey agencies to align their methods with the nationally agreed definitions and indicators to obtain maximum use and comparability of the data.

- Despite the accumulating evidence of the importance of breastfeeding for health in the short and longer term, there has been no progress on taking a more systematic approach to national monitoring of breastfeeding in Australia, since the publication of the AFNMU report in 2001. In fact, the NHS has not routinely included breastfeeding questions in recent surveys. NSW and Queensland Health Depts have worked with the recommendations in the 2001

AFNMU report, and have further developed and refined the indicators and measurements in their statewide CATI surveys, and are keen to share the benefit of their experiences and improvements with other states and territories and with federal agencies such as the ABS regarding methods for monitoring breastfeeding.

- Given the importance of the information about population breastfeeding practices, along with detailed information about food and nutrient intakes of both children and adults, NSW Health recommends that one of the most important actions for the Commonwealth is to take a lead role in establishing a monitoring system for breastfeeding in Australia, in conjunction with a wider system of monitoring food and nutrition in the population. Recommendations regarding a system for food and nutrition monitoring in Australia, incorporating breastfeeding monitoring, have been described in detail in a report commissioned by the Commonwealth Dept of Health and Aged Care, 2006 and prepared by Nexus Management Consulting.

- In summary, the most important role for the Commonwealth Dept of Health and Aging is to ensure that those responsible for planning, delivery and evaluation of health services and health promotion strategies have accurate and up-to-date information to work with regarding current breastfeeding practices in the population and sub-groups and how these are changing over time. Detailed recommendations concerning nationally agreed definitions and indicators for monitoring breastfeeding are already available from the 2001 report, and representatives of NSW Health and Queensland Health are willing and able to assist in the refinement of methods for national monitoring based on their experiences in monitoring breastfeeding at the state level. We urge the Parliamentary inquiry to act on these recommendations.

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