PREVENTING SUDDEN INFANT DEATH SYNDROME (SIDS)

GUIDELINES for PUBLIC HEALTH SERVICES

Tamariki Ora

PUBLIC HEALTH COMMISSION
PREVENTING SUDDEN INFANT DEATH SYNDROME (SIDS)

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093722
Relevant Public Health Goals

• To promote a social and physical environment which improves and protects the public health.

• To improve Maori health status so that in the future Maori will have the opportunity to enjoy at least the same level of health as non-Maori.

• To improve and protect the health of children.

Objective

• To continue the reduction in rates of sudden infant death syndrome.

Outcome Targets

• To reduce the total SIDS rate from 2.5 per 1,000 live births in 1991 to 1.5 per 1,000 or less by 1997, and to 1.0 per 1,000 or less by the year 2000.

• To reduce the Maori SIDS rate from 6.9 per 1,000 live births in 1991 to 4.5 per 1,000 or less by 1997, and to 2.5 per 1,000 or less by the year 2000.

• To maintain the side and back sleep positions for infants at six weeks at the 1991 prevalence rate of 95 percent.

• To reduce the proportion of women who smoke during pregnancy from 33 percent in 1991 to 25 percent or less by 1997, and to 20 percent or less by the year 2000.

• To reduce the proportion of Maori women who smoke during pregnancy from 68 percent in 1991 to 55 percent or less by 1997, and to 50 percent or less by the year 2000.

• To increase full breastfeeding at three months from 60 percent in 1991 to 70 percent by 1997, and to 75 percent by the year 2000.

• To increase breastfeeding (full or partial) at six months from 55 percent in 1991 to 70 percent by 1997, and to 75 percent by the year 2000.
Foreword

The Public Health Commission (PHC) is committed to improving and protecting the health of New Zealand’s children and their parents, caregivers, families, and whanau. Child health was identified as a priority area by both the PHC and the Core Services Committee, and the Government identified child health as a priority health gain area in the 1994/95 policy guidelines for the PHC and regional health authorities (Minister of Health, 1994a; 1994b).

In 1993 the PHC and Core Services Committee jointly published *Tamariki Ora*, a report on well child care (NACCHDSS and PHC, 1993). “Well child care” is a term commonly used to describe a range of health promotion and health protection activities undertaken in a primary health care setting. It includes activities undertaken by parents, families, the wider community, and both public health and primary health care services.

*Tamariki Ora* recommended that the specific components of well child care receive closer attention, including: information systems, schedules for screening, surveillance, immunisation, and health promotion, along with the provision of all of these in a co-ordinated manner. The PHC intended to develop a series of *Tamariki Ora* guidelines to assist providers of both public health and primary care services to improve and protect the health of children.

The emphasis is on developing guidelines for those priority areas identified in *A Strategic Direction to Improve and Protect the Public Health* (PHC, 1994a). Those include:

- parenting skills and social support
- primary health care
- tobacco use
- immunisation
- sudden infant death syndrome (SIDS)
- unintentional injuries
- child hearing loss.

The PHC provided advice to the Minister of Health in 1993–1994 on SIDS prevention outcome targets and policy, programme, and research and information targets, to achieve those outcomes (PHC, 1994b). One of the Healthy Public Policy recommendations was that the PHC develop and distribute national SIDS prevention guidelines.

The guidelines should be seen as part of a dynamic process. They will be updated as new information becomes available, and as new approaches to the delivery of services are developed. The guidelines are not designed to replace accreditation standards, service protocols, or the specific output and quality requirements that may be stated within service specifications and contracts.

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2  Preventing Sudden Infant Death Syndrome (SIDS)
A comprehensive and practical approach has been taken in developing the guidelines. It is intended that they be made widely available to all who work with children and their parents, caregivers, families, and whanau. Feedback on the guidelines is welcomed. This should be sent to the Deputy Director-General, Public Health, Ministry of Health, PO Box 5013, Wellington.

Dr Gillian Durham  
Chief Executive  
Public Health Commission
Acknowledgements

These guidelines were prepared by a Public Health Commission team and the Royal New Zealand Plunket Society. The team was led by John Eastwood, assisted by Murray Laugesen, Jenny Reid, Louise Signal, Barry Borman, Danielle Scully, Mark Clements, and Patrick Tuohy.

The PHC is very grateful to those who provided comment on earlier drafts. The reviewers included the four regional health authorities; Dr Mark Belsey, Programme Manager, WHO Programme of Maternal and Child Health and Family Planning, Geneva; Stephanie Cowan, Family Education Services, Christchurch; Dr Nigel Dixon, Southern Regional Health Authority, Dunedin; Dr Rodney Ford, University of Otago; Jackie Lay, Central Regional Health Authority, Wellington; Gillian Sinclair, North Health, Auckland; Assoc Prof Ed Mitchell, University of Auckland; Ruth Rhodes, Midland Regional Health Authority, Hamilton; Dr Robert Scrugg, University of Auckland; Dr David Tipene-Leach, National Maori SIDS Prevention Programme, Auckland; and Dr Louise Webster, Child Psychiatrist, Starship Children’s Health, Auckland.
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6 Preventing Sudden Infant Death Syndrome (SIDS)
The Public Health Commission (PHC) identified sudden infant death syndrome (SIDS) as a child health priority in 1993 and provided advice to the Minister of Health both on SIDS prevention outcome targets and on the policy, programme, and research and information targets needed to achieve those outcomes (PHC, 1994b). One of the Healthy Public Policy recommendations was that the PHC develop and distribute national SIDS prevention guidelines.

SIDS is still a major contributor to the death of infants after the first month of life (postneonatal deaths). In New Zealand, SIDS accounted for almost two-thirds of those deaths in 1990.

There has been a reduction in SIDS since 1990. This has been attributed to parents stopping the practice of sleeping their infants on their front. Although there has been a reduction in Maori infant deaths, rates remain four times those of non-Maori. There has been very little change in tobacco smoking or breastfeeding rates among pregnant women and young mothers.

The following have an important impact on SIDS and infant health:

- tobacco smoke
- infant sleeping practices
- poor antenatal care, low birthweight and short gestation
- young age of mother and early school leaving
- low maternal income
- breastfeeding.

The following underlying principles are discussed in these guidelines:

- Treaty of Waitangi
- primary health care
- health promotion
- universal and risk approaches.
Programmes to prevent SIDS and promote infant health

Priority must be given to delivering SIDS prevention programmes to Maori iwi, hapu, and whanau groups.

There are five main approaches to promoting infant health and preventing SIDS. They are to:

- **prevent tobacco addiction** and promote **smokefree families and whanau**
- **promote sexual and reproductive health** and the prevention of early teenage pregnancy
- **promote family and whanau wellbeing**, and **parent support and skills development programmes** for all families and whanau that include the promotion of safe infant care practices
- **deliver intensive home visiting support services to families and whanau in difficult circumstances.**

Service delivery

Health promotion and disease prevention services for children and their families or whanau are delivered by both personal health care and public health services. In preparing these guidelines the PHC has been aware that the information they contain could be found useful by primary health care workers such as community health workers, well child nurses and medical practitioners, and those working in early childhood education.

Appendices

The guidelines contain additional information in the following appendices:

1. Key messages to prevent SIDS
2. PHC health education resources as at April 1995
3. Additional reading
4. Tobacco control
5. Promotion of breastfeeding by health care services
6. Home visiting and parent support groups
7. Risk approach to infant care.
SIDS Epidemiology

SIDS is still a major contributor to the death of infants after the first month of life (post-neonatal deaths) and most occur at two to three months of age. In New Zealand, SIDS accounted for almost two-thirds of those deaths in 1990.

FIGURE 1: Leading causes of postneonatal mortality, 1990

Source: PHC, 1993a

Time and place

Before 1988, SIDS in New Zealand was characterised by a winter peak of deaths and a marked north-to-south gradient, with SIDS incidence increasing from north to south. This pattern has now changed with the reversal of the north-to-south gradient and the virtual elimination of the winter peak (Mitchell et al, 1994). There are no recent New Zealand published data concerning the geographical place of death, but studies in Auckland have found higher SIDS rates in low-income communities (Tonkin, 1975).

FIGURE 2: Sudden infant death syndrome, by ethnicity, 1970–1993

Source: PHC, 1994c

9 Preventing Sudden Infant Death Syndrome (SIDS)
Maori ethnicity

In the census and some health-related statistics Maori ethnicity is self-defined. Birth and death statistics record ethnicity on the basis of the percentage of Maori ancestry. Currently a biological definition of ethnicity is used for reporting mortality data. The effect of this is that the official figures under-report Maori SIDS and show the “best” rate difference between Maori and non-Maori.

Recent trends in SIDS

There has been a reduction in SIDS since 1990. This has been attributed to parents stopping the practice of sleeping their infants on their front (Mitchell et al, 1994). There has also been a reduction in Maori infant deaths, but rates remain four times those of non-Maori (Figure 2). Very little change has been observed in tobacco smoking or breastfeeding rates among pregnant women and young mothers (Mitchell, 1994).
The following have an important impact on SIDS and infant health:

- tobacco smoke
- infant sleeping practices
- breastfeeding
- young age of mother and early school leaving
- poor antenatal care, low birthweight and short gestation
- maternal income.

The current public health programme to reduce SIDS in New Zealand is based on the findings of the New Zealand Cot Death Study (Mitchell et al, 1991; 1992a; 1992b). A number of major risk factors were identified (see Table 1). Four of these risk factors may be amenable to behaviour modification. They are:

- prone sleep position
- bed-sharing by smoking mothers
- maternal smoking
- not breastfeeding.

These risk factors have been used for the development of key public health messages (see Appendix 1). In practice the modification of infant sleeping position has been the most successful. Breastfeeding initiation rates in New Zealand are high, and have not altered substantially over the last few years (Mitchell, 1994). Smoking rates among pregnant women are high, especially among Maori, and are proving difficult to reduce. Bed-sharing by Maori smoking mothers is an important risk behaviour and it is difficult to change a behaviour that is closely linked to cultural norms.

As well as these four risk factors, the New Zealand Cot Death Study identified a number of other important risk factors that may be influenced by policy and programme or service delivery strategies. These are:

- young age of mother
- early school leaving
- poor antenatal care
- birthweight and gestation
- low maternal income.

As with breastfeeding and tobacco smoking these other factors have a general impact on the health of infants and their parents or caregivers and are difficult to alter. To effect change will require combined interventions based on the risk approach and the five strategies for action of the Ottawa Charter (WHO, 1986).
Consequently these guidelines have a broad focus on infant health and propose strategies that aim to influence all the main risk factors, using both public policy and programme or service delivery mechanisms.

**TABLE 1: New Zealand Cot Death Study – Univariate odds ratios and population attributable risk for selected variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Univariate odds ratio</th>
<th>Population exposed</th>
<th>Population attributable risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother smoked while pregnant</td>
<td>4.1 (3.3, 5.1)</td>
<td>31</td>
<td>49</td>
</tr>
<tr>
<td>Prone sleep position</td>
<td>3.7 (2.9, 4.7)</td>
<td>33</td>
<td>47</td>
</tr>
<tr>
<td>Did not attend (formal) antenatal classes</td>
<td>2.6 (2.0, 3.4)</td>
<td>54</td>
<td>47</td>
</tr>
<tr>
<td>Not married</td>
<td>3.6 (2.8, 4.5)</td>
<td>26</td>
<td>40</td>
</tr>
<tr>
<td>Postnatal depression at 4 weeks</td>
<td>4.4 (1.8, 10.4)</td>
<td>16</td>
<td>35</td>
</tr>
<tr>
<td>Mother &lt;20 years at first pregnancy</td>
<td>2.9 (2.3, 3.6)</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td>Mother left school &lt;16 years</td>
<td>2.4 (1.9, 3.1)</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>Socioeconomic-status V, VI and other</td>
<td>2.6 (2.0, 3.3)</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Not breastfed at hospital discharge</td>
<td>2.4 (1.9, 3.0)</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Mother &gt;4 mths at first antenatal consultation</td>
<td>2.1 (1.6, 2.8)</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Maternal smoking &gt;20 cigarettes in last 2 weeks</td>
<td>3.4 (2.5, 4.7)</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Sharing parental bed – last sleep</td>
<td>2.7 (2.0, 3.6)</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Birthweight &lt;2,500 grams</td>
<td>4.3 (3.1, 6.0)</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Mother &lt;20 yrs – this pregnancy</td>
<td>2.5 (1.8, 3.3)</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Gestation – 28–33 weeks</td>
<td>5.2 (3.0, 9.0)</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Not breastfed – any stage</td>
<td>1.8 (1.3, 2.6)</td>
<td>8</td>
<td>6</td>
</tr>
</tbody>
</table>


**Technical notes**

1. The odds ratios indicate how many more times those exposed to the factor are at risk of SIDS relative to those not exposed. The univariate odds ratios are unadjusted for other factors.
2. The percentage of the population exposed to the risk factor is estimated by the percentage of the controls exposed from the New Zealand Cot Death Study.
3. The population attributable risk (PAR) is the proportion of SIDS that could be reduced if their exposure to the risk factor were avoided. This assumes that the risk factor is causally related to SIDS. Care should be taken with the interpretation of the PARs. The univariate odds ratios take no account of the effects of other factors which may affect the relationship (such as the mother smoking in pregnancy, or the age of the mother at first pregnancy), and many of the factors are potential confounders.
4. Socioeconomic status of both parents was categorised according to the Elley-Irving scale – 1 (highest) to 6 (lowest). Those who had never worked, had no occupation, were a new worker seeking employment, or had inadequately described occupations were placed in a separate category called "others".
5. The exposures are dichotomised.
6. The population attributable risk for bed-sharing among smoking mothers is 26 percent and 3 percent for infants of non-smoking mothers. This has been calculated differently to those in Table 1 (Scragg et al, in press).
Underlying Principles

Intervention to reduce SIDS and promote infant health should be based on:

- the Treaty of Waitangi
- primary health care
- health promotion
- universal and risk approaches.

Treaty of Waitangi

The Treaty of Waitangi is recognised as the founding document of New Zealand (Department of Health, 1992). The fundamental base of any relationship between Maori and a Crown agent should be the Treaty of Waitangi. The PHC and the Government acknowledges that it must help meet the public health needs of Maori and address the improvement of their public health status. The Treaty contains within it specific obligations which require the Government, as Treaty partner, to address the inequitable position of Maori (Department of Health, 1992). This means that Maori infants are guaranteed, under the Treaty of Waitangi, the right to enjoy at least the same health status as non-Maori infants.

Primary health care

Primary health care is a central element of New Zealand's health policy. Strong primary health care is important for the delivery of infant health and SIDS prevention programmes.

"Primary health care is essential health care made universally accessible to individuals and families in the community by means accessible to them, through their full participation and at a cost that the community and country can afford" (WHO, 1978).

Health promotion

The PHC uses the Ottawa Charter for health promotion when considering public health strategies. The principles of the Charter apply to all public health and primary health care activities with infants and their families/whanau.

"Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental, and social well-being, an individual or group must be able to identify and to realise aspirations, to
satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the object of living. Health is a positive concept emphasising social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy lifestyles to wellbeing" (WHO, 1986).

The Ottawa Charter defines health promotion action to mean (WHO, 1986):

- building healthy public policy
- creating supportive environments
- strengthening community action
- developing personal skills
- reorienting health services.

Health promotion is an active process of disease prevention encompassing educational components, including individual and group change and techniques which, together with environmental, legislative, and organisational interventions, make up a range of strategies for better health. This process is shown diagrammatically below.

**FIGURE 3: The process of health promotion**

(Egger et al., 1990)

As discussed later (see Service Delivery) population-based strategies are currently purchased using public health funding, and individual strategies are purchased using personal health and disability services funding.

**Universal and risk approaches**

Public health intervention strategies can be implemented using either universal (whole) population or risk population approaches. The universal population approach aims to change, in a whole population, factors that contribute to an adverse health outcome such as SIDS. The risk approach aims to increase the effectiveness of public health strategies by focusing them on those individuals or groups in a given population who have a higher risk of the adverse health outcomes (Backett et al., 1984).
Both approaches can be used by public health and personal health care policy advisors and service providers. Examples relevant to the prevention of SIDS are:

<table>
<thead>
<tr>
<th>Public health policy advice, purchase or delivery of services</th>
<th>Universal (whole) population approach</th>
<th>Risk population approach</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• excise taxation of tobacco</td>
<td>• targeted income support policies for low-income families with infants</td>
</tr>
<tr>
<td></td>
<td>• the Smoke-free Environments Act</td>
<td>• identify those defined geographical areas with a higher population prevalence of factors that are associated with adverse health outcomes and provide extra public health/health promotion workers for those neighbourhoods or population groups</td>
</tr>
<tr>
<td></td>
<td>• the International Code of Marketing of Breastmilk Substitutes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• smokefree, breastfeeding, and safe sleeping promotion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• housing policies</td>
<td></td>
</tr>
<tr>
<td>Personal health care policy advice, purchase or delivery of services</td>
<td>• free maternity services to all pregnant women</td>
<td>• identify from the population in a defined geographical area those individual mothers and infants with factors that are associated with adverse health outcomes and provide extra support services</td>
</tr>
<tr>
<td></td>
<td>• monthly home visiting and parent groups for all new parents (universal approach)</td>
<td>• support groups and weekly home visiting for teenage, solo, and low-income caregivers</td>
</tr>
<tr>
<td></td>
<td>• the Baby-Friendly Hospitals Initiative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• smokefree and breastfeeding promotion to new parents</td>
<td>• extra primary care resources in neighbourhoods with higher levels of adverse health outcomes</td>
</tr>
<tr>
<td></td>
<td>• promotion of safe infant sleeping practices to new parents</td>
<td>• monitor the delivery of personal health services to mothers and infants identified with higher risk of adverse outcomes</td>
</tr>
</tbody>
</table>

15 Preventing Sudden Infant Death Syndrome (SIDS)
Programmes to Prevent SIDS and Promote Infant Health

Priority
Priority must be given to delivering SIDS prevention programmes to Maori iwi, hapu and whanau groups.

Programmes
There are five main approaches to promoting infant health and preventing SIDS. They are to:

• **prevent tobacco addiction** and promote smokefree families and whanau

• **promote sexual and reproductive health** and the prevention of early teenage pregnancy


• **promote family and whanau wellbeing**, and parent support and skills development programmes for all families and whanau that include the promotion of safe infant care practices

• **deliver intensive home visiting support services to families and whanau in difficult circumstances.**

As discussed earlier, the risk factors for SIDS also impact on general infant health. For this reason a more comprehensive approach has been taken to developing strategies.

The prevention of SIDS and promotion of infant health cannot be undertaken as a single isolated programme. The initial success of the 1991 National Cot Death Programme was largely due to changes in infant sleep position. The key behavioural messages were primarily delivered using a universal parent skills development programme. Following an analysis of the epidemiology, risk factors (*Table 1*), and underlying principles for public health action, the following have been identified as priorities:

• delivery of appropriate programmes to Maori

• population-based strategies including public policy and improved or reoriented programme/service delivery for tobacco control and breastfeeding promotion

• modifying, where possible, prepregnancy and antenatal factors (see *Table 1*) that impact on SIDS and infant health

• improved delivery of services and support to families and whanau most at risk of SIDS and other poor infant health outcomes (such as young mothers, early school leavers, and low-income families).

As well as these focused risk approaches it is also necessary to continue the universal promotion of safe infant care practices, family and whanau wellbeing, and parent support and skills development programmes for all families and whanau.

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16 Preventing Sudden Infant Death Syndrome (SIDS)
Priority

Maori SIDS prevention

Priority
Priority must be given to delivering SIDS prevention strategies to Maori iwi, hapu and whanau groups.

Epidemiology
The Maori SIDS rate is four times that of non-Maori. This rate is based on a biological definition of ethnicity. Rates based on self identification could be higher.

The SIDS rate in Maori may be higher due to:

- a higher prevalence of common risk factors; or
- different or more powerful risk factors.

The overall prevalence of many risk factors is higher in Maori than non-Maori. In the New Zealand Cot Death Study, Maori mothers were socioeconomically disadvantaged, younger, and much more likely to smoke than non-Maori mothers. Their infants were of lower birthweight and were more likely to share a bed with another person. The prevalence of breastfeeding and prone sleeping position of infants did not differ between the two ethnic groups. It was also estimated that 22 percent of the Maori SIDS rate was attributable to mothers not exclusively breastfeeding at the time of discharge and 38 percent to prone sleep position (Mitchell et al, 1993a).

The magnitudes of the relative risks were remarkably similar for both ethnic groups, with the exception of prone sleep position, which was a greater risk for non-Maori, and bed-sharing, which was a risk only for Maori.

The relative risk from bed-sharing is only increased when the mother smokes (Mitchell and Scragg, 1994). It has been estimated that 54 percent of Maori SIDS deaths can be attributed to the joint and separate effects of bed-sharing and maternal smoking (Scragg et al, in press).

Public health services for Maori
The PHC is conscious of the wish expressed by Maori that resources and services specifically for Maori should be developed and provided by Maori. Health promotion and parenting programmes should be developed for Maori in a manner that is consistent with that described in *He Matariki: A Strategic Plan for Maori Public Health* (PHC, 1995a; 1995b).
The Government requires purchasers to be guided in the development of their purchasing strategies by the Crown’s Maori health objective of improving Maori health status. This objective, which actively seeks to promote Maori health advancement, should be considered in conjunction with:

- the need to recognise Maori aspirations and structures such as those based around whanau, hapu, and iwi and the desire of Maori to take responsibility for their own health care
- the need to purchase public health services and encourage initiatives which promote positive health for Maori, and
- the need to encourage the greater participation of Maori in order to develop health solutions which are effective, affordable, accessible, and culturally appropriate (PHC, 1995b).

Culturally appropriate auditing

One of the key objectives of the development of public health services for Maori is (PHC, 1993b):

to develop systems to ensure that culturally appropriate practices and procedures are an integral requirement in the purchase and provision of health services.

The monitoring of services in relation to Maori will be an integral part of public health purchasing activities. The CHI Model (PHC, 1994d), a culturally appropriate auditing model (the acronym CHI stands for consolidation, holistic, and interactive), has been developed for use by the PHC as the basis for monitoring all provider contracts. The model is being tested in purchasing arrangements in 1994–1995. If effective, it will be applied more widely in future years. The CHI Model for providers ascertains:

- how a SIDS prevention programme is related to positive Maori development (for example, Treaty issues)
- what health gains in terms of reduction in SIDS risk factors and SIDS death rates can be expected for Maori in a SIDS prevention programme (for example, their involvement, government obligations, data and information), and
- whether the programme is sensitive to Maori cultural values and beliefs (for example, their cultural safety).

Maori provider development

Initiatives that will improve the prevention of Maori SIDS should be supported.

More Maori should be included in the purchasing and provision of services to Maori to ensure Maori management of public health matters Maori: for example, SIDS prevention programmes developed for Maori, by Maori. Few Maori organisations exist to deliver national public health programmes to Maori, and the number of qualified
Maori public health service providers is limited. Nevertheless, many Maori groups wish to be involved in the purchase and provision of public health programmes to Maori. As well as continuing to support existing Maori organisations effectively delivering SIDS prevention programmes to Maori, public health purchasers and providers should seek to assist the development of new Maori providers. Joint ventures and partnerships are other ways in which culturally appropriate, high quality SIDS prevention programmes can be provided to Maori.

There are significant barriers to health development for Maori, and to the ability of Maori health initiatives to:

- measure and evaluate the effectiveness of their SIDS prevention programmes and their impact on health outcomes for Maori
- plan effectively in a community setting where continuity is needed to build up trust
- attract and retain skilled Maori health workers where “burn out” is a major issue, and
- accurately assess the true cost of their service provision which relies heavily on a large voluntary component.

Contractual arrangements with Maori providers should recognise the impact of lack of continuity of funding, under-funding, and rigid purchasing criteria on their ability to build and sustain health infrastructures so that Maori have the opportunity to enjoy at least the same level of health status as non-Maori (PHC, 1995b).

**Workforce development**

Workforce development is an important issue. Maori are currently under-represented in the health workforce. The effectiveness of SIDS prevention programmes for Maori may increase if the services involved more Maori. This could be done by increasing Maori participation at all levels and in particular, the delivery of SIDS prevention programmes to Maori. There is also a need for non-Maori health professionals to receive training thereby ensuring that the programme provided is delivered in a culturally appropriate manner (PHC, 1995b).

The PHC recommended to the Minister of Health in 1993 (PHC, 1994b) that the PHC purchase the national co-ordination of SIDS/well child care. The National Maori SIDS Prevention Programme was first purchased in 1994. The programme is currently responsible for:

- dissemination of information about SIDS risk factors and SIDS risk management
- development of an Ukaipo (breastfeeding) programme
- strengthening linkages between Maori well child services.
The National Maori SIDS Prevention Programme plan for 1995–1997 identifies the following themes:

- a movement from a focus on SIDS toward a more holistic approach in well child health care, with an emphasis on support systems for at risk families
- further development of the breastfeeding (Ukaipo) programme
- the move toward co-ordinated training of community health workers and lay people
- a community development approach to the reorientation, strengthening, and co-ordination of appropriate services in the community
- a move toward programme integration with programmes provided by other Maori independent service providers.

Public health activities

Public health provider activities should (PHC, 1995c):

- give priority to the development and implementation of the activities described in these guidelines for Maori
- consult with and, where appropriate, establish formal relationships with other providers (including the budget holding and joint venture purchasing arrangements) to ensure co-operation and the delivery of a co-ordinated Maori SIDS prevention programme
- promote and assist with whanau wellbeing by the development of Maori health policies and programmes including smokefree, well child care services, and other whanau development initiatives as outlined in He Matariki: A Strategic Plan For Maori Public Health (PHC, 1995b)
- be aware of and support Maori SIDS prevention initiatives
- utilise the PHC's guidelines for the development of Maori health education materials (under development)
- inform, educate, and support primary health care workers and potential workers who assist in the provision of Maori SIDS prevention programmes
- promote safe and appropriate health care practices by people involved in Maori SIDS prevention
- provide assistance, where appropriate, to health and related agencies to refocus their priorities for, and funding and delivery of, SIDS prevention programmes to Maori
- encourage health promoting and SIDS prevention practices within the existing health services
- review existing resources for their effectiveness in Maori SIDS prevention and their relevance to national and regional standards and guidelines

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• provide assistance, where appropriate, to Maori health groups, for policy development and staff training which will contribute to the prevention of Maori SIDS.

**Personal health care activities**

Personal health care purchasers and providers should ensure the provision for Maori of the SIDS prevention activities in these guidelines through the (Minister of Health, 1995a; 1995b):

- provision of pregnancy and childbirth services to meet the identified needs of Maori women and whanau
- provision of SIDS prevention, health promotion, and education services for individuals and whanau
- access for individuals and whanau without charge to at least one source of tamariki ora/well child service that provides SIDS prevention activities
- provision of surveillance and support for at risk Maori whanau and for youth/tamariki at risk of abuse or neglect.
Programmes

Prevent tobacco addiction and promote smokefree families and whanau

The key strategies are to:
• prevent young people becoming addicted to tobacco
• promote a smokefree start to life
• help smokers change their smoking behaviour.

Epidemiology

The New Zealand Cot Death Study showed that maternal smoking was one of the major risk factors for SIDS in the New Zealand population. Smoking during pregnancy increased the risk four times, and smoking 20 cigarettes per day after pregnancy raised the risk of SIDS six times. There was a marked dose response curve, with heavier smoking increasing the risk (Mitchell et al, 1991).

FIGURE 4: Relative risk for SIDS, by maternal smoking in the last two weeks before infant death

The study has also shown an increase of four to five times the rate of SIDS among smoking mothers who regularly share their bed with their infant compared with infants of mothers who neither smoked nor shared their parents’ bed (Scragg et al, 1993).

The Plunket National Child Health Cohort study showed that in New Zealand in 1990, 33 percent of pregnant women smoked (Alison et al, 1993). The rates were higher for young women (64 percent of those under 20 smoked), Maori women (68 percent), early school leavers, women in de facto or single marital situations, and women whose husbands were unemployed.
The main problem is the high percentage of young people, especially young women, who are taking up smoking. Over 40 percent of all young women in their early twenties smoke and over 70 percent of Maori women in their twenties smoke. These rates have shown no change for many years.

Key message

The key message is:

**Having a smokefree pregnancy and a smokefree home helps protect against SIDS**

Prevent young people becoming addicted to tobacco

The PHC’s policy advice to the Minister of Health on tobacco products indicated that there may be a need to increase the price of cigarettes further (especially through increasing tax on the cheaper roll-your-owns) if cigarettes are to be put out of the reach of children (PHC, 1994e). The PHC undertook further analysis of the relationship between taxation and consumption of cigarettes, and in March 1995 released a discussion paper *Tobacco Taxation as a Health Issue* (PHC, 1995d).

At age 18 three out of ten of a cohort of Dunedin-born young people were smokers and nearly two out of ten (56 percent of the regular smokers) were clinically addicted to nicotine (Stanton, 1995).

An important approach is to stop under-age sales. All primary care and public health workers could play a role in the enforcement of the Smoke-free Environments Act 1990. The appointed smokefree officers usually rely on receiving information concerning an offence before acting, but they may also be able to seek evidence for a prosecution through primary care and other public health workers (Appendix 4).

Education of shopkeepers by itself has no significant effect (Skretny et al, 1990; Feighery et al, 1991) or an effect waning after six months (Altman et al, 1991). Educating shopkeepers and fining them for non-compliance reduced sales to youth (Feighery et al, 1991) and reduced youth smoking by around one quarter (DiFranza et al, 1992) to two-thirds (Jason et al, 1991). Systematic purchase surveys and evidence gathering of sales to children are part of public health surveillance. Enforcement of the ban on tobacco sales to children is regarded as the top priority for smokefree law enforcement (PHC, 1994e).
Public health activities

Public health provider activities should (PHC, 1995c):

- deliver a proactive programme to obtain evidence of under-age sales of tobacco products. This programme could involve a wide range of public health provider staff working with voluntary agencies and children under supervision to put local tobacco product outlets under surveillance for sales to children
- report breaches in observance of the Smoke-free Environments Act 1990
- contribute to the delivery of the smokefree environments service as outlined in the Public Health Regulatory Service Specifications (Ministry of Health, 1995) (Appendix 4)
- provide advice and expertise to facilitate the implementation of the Smoke-free Environments Act 1990
- provide tobacco control training to all public health and primary care workers and volunteers, including knowledge of the smokefree environments legislation
- facilitate the provision of programmes in the community which aim to encourage teenagers not to start smoking
- use primary and secondary schools as an efficient setting in which to deliver educational programmes to large numbers of young people (it is not the job of public health workers to teach in classrooms, but to resource teachers for this)
- encourage young people to participate actively in smoking control activities (eg, through health clubs or competitions)
- develop the skills of young people to resist the social and marketing pressures to smoke by providing appropriate learning experiences in schools for the development of social and personal skills.

Personal health care activities

Personal health care purchasers and providers could assist by:

- reporting breaches in observance of the Smoke-free Environments Act 1990
- contributing to a collaborative programme over several months to obtain evidence of under-age sales.

Women and infants should be protected from exposure to tobacco smoke in workplaces, transport, and shops, among other public places. Provisions to control their exposure to tobacco smoke are included in the Smoke-free Environments Act 1990 Part I (see Appendix 4).

Promote a smokefree start to life

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Enforcing the Smoke-free Environments Act 1990 requires a full spectrum of surveillance, education, evidence gathering, and prosecution activities. Until now, the health workforce has concentrated on education in response to complaints; but Part I of the Act is being widely flouted. Surveillance and enforcement need strengthening (PHC, 1994e).

The promotion of smokefree pregnancies and smokefree homes through maternity, well child care, and primary care services is a key strategy.

**Public health activities**

Public health provider activities should (PHC, 1995c):

- provide advice and expertise to facilitate the implementation of the Smoke-free Environments Act 1990 with respect to all indoor public areas
- encourage and enforce the adoption of smokefree environments in homes, playgroups, clinics, early childhood education services (including kohanga reo), maternity services, shops, marae, and all community facilities used by mothers with young infants. (The Early Childhood Centre Regulations 1990 require all areas used by children to be smokefree, and the Smoke-free Environments Act 1990 requires public parts of workplaces to be smokefree)
- report breaches in observance of Part I of the Smoke-free Environments Act 1990
- contribute to the delivery of the smokefree environments service as outlined in the Public Health Regulatory Service Specifications (Ministry of Health, 1995) (Appendix 4)
- provide tobacco control training to all public health and primary care workers and volunteers, including knowledge of the smokefree environments legislation.

**Personal health care activities**

Personal health care purchaser and provider activities should:

- adopt a smokefree policy for all staff while working in contact with members of the public
- encourage the adoption of smokefree environments in homes, playgroups, clinics, early childhood education services, maternity services, marae, and all community facilities used by mothers with young infants
- promote information to parents about the increasing risk of SIDS with increasing smoking levels (the more you smoke the greater the risk)
- promote to parents who smoke information about the increased risk of SIDS if they also sleep with their baby in bed with them.
Help smokers change their smoking behaviour

The use of the term change rather than cessation is new. It relates to an increased emphasis on encouraging smokers to make positive changes in their smoking behaviour (i.e., reduce the nicotine content and number of cigarettes smoked) before stopping smoking altogether.

Reduced smoking levels among women and within families will improve infant health and help prevent SIDS. There is some urgency about this for the period of high vulnerability for the developing child during pregnancy and infancy. For best results, reducing maternal and family smoking levels needs to be everyone's business. All primary health care workers have a role to play. There are several ways that individuals can achieve improved protection for the fetus and infant:

- by providing a smokefree home
- by smoking less
- by stopping completely (see Appendix 4), and
- by maintaining change.

Women need to choose and work toward goals that are possible for them. There is evidence that intent to change is high amongst pregnant women and that significant change can be made during pregnancy [Ford R, personal communication, February 1995].

In the past, the prevention focus has been on smoking cessation. During pregnancy in particular, this needs to be broadened to include smoking changes, cessation, and maintenance (Fisher et al, 1990).

The PHC has recommended that regional health authorities purchase smoking cessation (change) programmes (PHC, 1994e). The PHC is currently purchasing nationally smoking change training for public health and primary care providers from Family Education Services, Christchurch; the Maori SIDS Prevention Programme, Auckland; and Te Hotu Manawa Maori, Auckland.

Public health activities

Smoking change counselling, clinics, or groups is personal health care and will not be funded from public health funding. Public health workers are asked to encourage personal health care (primary health or CHE) services to provide assistance for smokers to change their smoking behaviour as part of good care and practice, but only as a personal health care staffing and funding responsibility.

Smoking change counselling clinics for youths are not effective (National Cancer Institute, 1994). Parents are best advised to negotiate rewards for smoking change and sustained stopping by teenagers.
Public health funding can be used to purchase smoking change through the mass media and through health education materials, as this is a population-based public health responsibility.

Public health provider activities should (PHC, 1995c):

- Encourage providers of primary personal health care services to regard smoking cessation as essential. For example:
  - identifying smokers and offering them counselling to change their smoking behaviour
  - promoting the delivery of smoking cessation programmes and support groups to pregnant women and mothers who are smoking
  - providing training for primary health care workers in the delivery of smoking cessation programmes as part of general practice, well child care, midwifery, and community nursing practice
  - promoting the use of smoking change information in a culturally appropriate manner, and
  - ensuring that primary care providers have supplies of relevant smokefree and smoking change education materials.
- Re-orient the purchasers and providers of secondary health services. Public health units can encourage the integration of smoking change into personal health care. This can assist Crown health enterprises wishing to lower demand for expensive newborn intensive care, beds for stroke and chest disease and lower waiting lists for heart surgery, to take action to:
  - identify smokers
  - offer them cessation services, and
  - consider supporting media-community efforts to give up smoking.

Personal health care activities

Personal health care provider activities should:

- adopt a smokefree policy for all staff and involve all staff in the provision of cessation and maintenance work
- undertake training in the planning, delivery, and evaluation of programmes to promote and maintain changes in smoking-related behaviour
- include smoking change, cessation, and maintenance work in all aspects of routine primary care delivery
- promote smoking change, cessation, and maintenance as an important component of the work of all health professionals, both in hospital and community settings
- provide smoking change, cessation and maintenance programmes through pregnancy and childbirth services

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• facilitate the delivery of smoking change, cessation, and maintenance programmes to pregnant Maori women
• develop culturally appropriate smoking change, cessation, and maintenance programmes.
• collect tobacco smoking status during pregnancy as part of patient management information systems.

Promote sexual and reproductive health

The key strategies are to:
• promote sexual and reproductive health programmes and services for young people to prevent early pregnancy
• provide support and preventive services for pregnant adolescents.

Epidemiology

Young maternal age is a risk factor for infant health and SIDS (Backett et al, 1984; Mitchell et al, 1992a). The SIDS mortality rate decreases in an almost linear fashion with maternal age (Figure 5).

**FIGURE 5: Average New Zealand SIDS mortality 1985–87, by maternal age**

![Graph showing average New Zealand SIDS mortality 1985–87, by maternal age](source: Maskill, 1991.)
New Zealand has a relatively high rate of adolescent births compared with other industrialised countries. The 1990 fertility rate for women under 20 was 34.4 per 1,000 women (Department of Statistics, 1990). The rate is triple that of Sweden (11.4) and Denmark (9.1). It is also greater than Australia (20.2) and Canada (23.2). Although some adolescent pregnancies are planned, most result from failure to use contraception. This occurs when couples had not planned on being sexually active, or there were perceived barriers to obtaining contraception (Gray, 1988). Adolescents appear to recognise the need to delay having children (Morris, 1985), but the link between knowledge and behaviour is sometimes tenuous.

The underlying causes for the higher SIDS rate among infants born to adolescent women is unclear. It is important to realise that the age of pregnancy may not itself be the important factor. One explanation may be the higher smoking rates among adolescent women. The social isolation often associated with young single mothers in our society also places added strains on a young person at a very vulnerable time. Another possible factor is that the nutritional requirements of a pregnant teenager who is still herself requiring nutrition for growth, may not be met with the diet she considers normal (PHC, 1995e).

Key message
The policy development of key messages for sexual and reproductive health has not yet been undertaken. It is expected that this work will occur during 1995–1996.

Promote sexual and reproductive health
The PHC and the Ministry of Health are currently undertaking new policy and programme planning for sexual and reproductive health programmes and services. This project will consider both healthy public policy and programme and service approaches. The following strategies could be used:

• providing information to young people before they become sexually active
• helping parents and caregivers to deliver health information to young people by developing resources for parents and involving them in their children’s education in sexual and reproductive health
• encouraging school and community-based programmes that take into account the cultural and wide community issues that influence sexual and reproductive health behaviour
• providing improved access to sexual and reproductive health services so that young people can control their own fertility. This could include:
  – improving geographical availability
  – improving cultural (including teen culture) appropriateness
  – reducing cost barriers, and
  – ensuring confidentiality.
A large number of studies have confirmed the relationship between perinatal factors such as prematurity, low birthweight, intensive care admission, poor antenatal weight gain, and provision of antenatal care with SIDS (Mitchell et al., 1992a; Kraus et al., 1989; Bentele and Albani, 1988). A number of studies have demonstrated reduced low birthweight and prematurity rates following enhanced support to pregnant women (Morrell, 1990; Clark et al., 1986). Preterm delivery among smokers was significantly reduced in one study which provided young mothers with extra support from a health professional throughout pregnancy (Olds et al., 1986).

Although there is debate over the optimal time to begin formal prenatal care, many reports suggest that prenatal care started after the second trimester is associated with low birthweight and higher postnatal mortality, including SIDS (Ryan et al., 1975; Lewis, 1982; Mitchell et al., 1992a). Clark and others (1986) found that comprehensive antenatal care, delivered to a high risk group, had positive effects on pregnancy outcome. One study which examined the effectiveness of antenatal intervention showed a significant decrease in postneonatal mortality as an end point (Sokol, 1980). There is also evidence from risk assessment studies that strategies designed to improve antenatal care are also likely to have an effect on postneonatal mortality.

Essex and others (1992), in a cohort study of 4,000 New Zealand infants, noted significant sociodemographic variation in the use of antenatal clinics. Late attenders tended to be younger, “single”, have less education, higher parity, lower socioeconomic status, and were more likely to be of Maori or Pacific Islands ethnicity, than mothers who began antenatal care within the first trimester. The study did not cast light on the reasons for late or non-attendance, but other studies have noted poverty, increased pressure of other children, and lack of awareness of the benefits (education), as being significant factors (Cooney, 1985).

**Public health activities**

Public health providers should (PHC, 1995c):

- work with personal health care services to facilitate the development of support and preventive services for pregnant adolescent women, including home visiting, adolescent antenatal clinics, and development and support of specific services for Maori
- facilitate the development of community-based antenatal groups and delivery of antenatal health education
- provide information to pregnant adolescent women regarding the additional nutritional requirements during pregnancy as recommended in *Food And Nutrition Guidelines for Healthy Pregnant Women* (PHC, 1995c) and *Food And Nutrition Guidelines for Healthy Breastfeeding Women* (PHC, 1995f)
- facilitate the development of pregnancy surveillance systems that ensure that women with higher risk of adverse outcomes receive appropriate preventive services
- promote the development of community-based antenatal clinics (such as on marae, or urban-based community services that are user-friendly and accessible for Maori women)
• facilitate the development of antenatal education classes with an emphasis on adolescent parents

• facilitate the development of postnatal education programmes for adolescent parents.

**Personal health care activities**

Personal health care providers should:

• develop and provide sexual and reproductive health services that are appropriate for young people and that have improved physical, cultural, and financial accessibility

• develop and provide antenatal services in the community (such as on the marae, and services that are provided by Maori professionals such as Maori midwives)

• develop and provide increased levels of antenatal services to pregnant women with higher risks including home visiting and group education sessions

• develop and maintain pregnancy surveillance systems that ensure that women with higher risk of adverse outcomes receive appropriate preventive services and develop and provide risk assessment protocols for use during pregnancy

• promote the development of adolescent mother support groups during pregnancy.

**Promote breastfeeding**

The key strategies are to:

• promote and support breastfeeding

• promote baby-friendly hospitals

• promote and monitor the International Code of Marketing of Breastmilk Substitutes.

**Epidemiology**

The New Zealand Cot Death Study (Ford et al, 1993) found that SIDS rates were twice as high among bottle-fed infants compared with those exclusively breastfed. Exclusive breastfeeding was more protective than partial breastfeeding, which in turn, was better than not breastfeeding. This suggests a dose effect.

Breastfeeding rates were high, with 92 percent of controls initially breastfed compared with 86 percent of SIDS cases. As time went by, cases stopped breastfeeding sooner than controls: by 13 weeks, 67 percent of the controls were breastfed compared with 49 percent of cases. The reduced risk for SIDS in breastfed infants persisted during the first six months.
In New Zealand, breastfeeding initiation and maintenance rates are at a high level compared with other industrialised countries. The Plunket National Child Health Study (Alison, 1992) showed that in 1991, 93 percent of women planned to breastfeed their infant, and 94 percent of these successfully initiated breastfeeding. Although there were socioeconomic differences with regard to ethnicity, socioeconomic status, maternal age, and education, the levels of breastfeeding initiation were consistently 90 percent or above. The subsequent decline in breastfeeding was most pronounced over the first week although the levels of exclusive breastfeeding remained high to three months of age with minimal variation by ethnicity (Figure 6).

FIGURE 6: Infants fully or partially breastfed, by age of infant and ethnicity of mother

The most important factor in early cessation of exclusive breastfeeding was the planned method of feeding, with women who planned not to exclusively breastfeed more likely to stop early. Maternal smoking, primiparity, lower levels of maternal education, and Maori ethnicity were all factors associated with early cessation of exclusive breastfeeding.

These findings were confirmed by the New Zealand Cot Death Study which found that a shorter overall “duration” of breastfeeding was associated with maternal smoking, subsequent dummy use, mother not bed-sharing, twin pregnancy, mother less than 20 years old at first pregnancy, low occupational status, and not attending antenatal classes (Ford et al, 1994a).
Recent data collected from the Royal New Zealand Plunket Society’s Management Information System [Smale P, personal communication, July 1994] indicate that there has been very little change in the breastfeeding rates for infants in the first three months of life.

**Key message**
The key message is:

**Breastfeeding your baby helps protect against SIDS**

**Promote and support breastfeeding**
The benefits of breastfeeding to both mother and infant are numerous and well documented (PHC, 1995f; 1995g). The promotion of breastfeeding is a public health issue that has been advanced internationally through the efforts of United Nations agencies such as WHO and UNICEF and non-government agencies such as the La Leche League. Evaluations of the effectiveness of public health interventions have been few. It is clear, however, that antenatal knowledge appears to be insufficient, and that the key factors determining a woman’s future breastfeeding behaviour are (WHO, 1989):

- her antenatal intention to breastfeed
- continuing postnatal support and care by maternity services
- paternal and family support
- community support.

The promotion of baby-friendly hospitals and the International Code of Marketing of Breastmilk Substitutes (WHO, 1981) are intended to influence all these factors. The intention to breastfeed is likely to be influenced by a wide range of other factors including family, community, and social attitudes, values and beliefs. Public health programmes need to be developed that not only improve knowledge of breastfeeding but change attitudes and increase the number of women intending to fully breastfeed until at least six months postpartum.

**Public health activities**
Public health providers should (PHC, 1995c):

- promote breastfeeding as the first option and support the work of other agencies who promote breastfeeding and support breastfeeding mothers
- facilitate the development and maintenance of community groups and voluntary organisations that promote breastfeeding and provide support for mothers with infants.

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• distribute appropriate breastfeeding resources including the *Food and Nutrition Guidelines for Healthy Breastfeeding Women* (PHC, 1995f) and *Food and Nutrition Guidelines for Healthy Infants and Toddlers* (PHC, 1995g)

• contribute to the dissemination of information promoting breastfeeding in local magazines, newsletters, and newspapers

• facilitate the development of breastfeeding and new parent support groups.

**Personal health care activities**

Personal health care purchasers and providers should:

• promote breastfeeding as the first option and support the work of other agencies that promote breastfeeding and support breastfeeding mothers

• facilitate the development of breastfeeding and new parent support groups

• support and advise breastfeeding mothers during the first six months with an emphasis on those categories of mothers who are at higher risk of stopping breastfeeding (eg, those smoking, with a low level of maternal education, and primiparous mothers).

For further activities and key practices, see *Appendix 5*.

**Promote baby-friendly hospitals**

The PHC has recommended that regional health authorities, through their purchasing contracts, ensure that pregnancy and childbirth services promote baby-friendly hospitals, as an integral part of their antenatal, birthing, and postnatal services (PHC, 1994b).

The Baby-Friendly Hospitals Initiative (BFHI) is a joint UNICEF-WHO initiative to promote breastfeeding. The idea of the BFHI is to focus on the needs of the mother and her newborn. The intent of the baby-friendly approach for health care services is covered in *Appendix 5*. The “Ten Steps to Successful Breastfeeding” associated with the Baby-Friendly Hospital Initiative need to be reviewed and re-interpreted for the New Zealand situation. For a health sector specific response to the baby-friendly approach, see *Appendix 5*.

**Public health activities**

Public health providers should (PHC, 1995c):

• promote and monitor the adoption/implementation of baby-friendly hospitals that have policies and key practices as outlined in *Appendix 5*. 

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Personal health care activities

Personal health care purchasers and providers should:

• promote baby-friendly hospitals as an integral part of their antenatal, birthing, and postnatal services.

The International Code of Marketing of Breastmilk Substitutes has been adopted by New Zealand. The Code is voluntary and is not enforceable through legislation. The PHC is responsible for the monitoring and promotion of the Code and intends purchasing this function from a suitable provider organisation.

The Code is relevant to New Zealand and other industrialised countries. It is an important strategy for the promotion of breastfeeding and prevention of SIDS in New Zealand. The Code seeks to encourage and protect breastfeeding and to limit inappropriate marketing practices used to sell products for artificial feeding. The Code is relevant to: artificial milks for babies (breast milk substitutes); other products used to feed babies, especially when they are marketed for use in a feeding bottle; feeding bottles and teats. The Code seeks to promote and encourage breastfeeding through the following mechanisms:

• limiting inappropriate advertising of these products to the public
• recommending no free samples to mothers
• restricting inappropriate promotion of the products in health care facilities
• recommending that advice be given to mothers by appropriately trained health workers only
• restricting inappropriate gifts or personal samples to health workers
• recommending that inappropriate idealising of artificial feeding, including pictures of infants under six months of age, should not be used on the labels of the products
• ensuring that information to health workers is scientific and factual
• ensuring that all information on artificial infant feeding, including the labels, explains the benefits of breastfeeding, and the costs and potential hazards associated with artificial feeding
• ensuring that unsuitable products, such as sweetened condensed milk, are not promoted for babies
• ensuring that all products are of a high quality and take account of the climatic and storage conditions of the country where they are used.

In New Zealand the Code is currently relevant for infants up to the age of six months. While promoting breastfeeding the Code does not restrict the sharing of factual information on appropriate bottle-feeding techniques. Information on appropriate bottle-feeding techniques and infant formulae can be provided by trained health professionals to those parents requiring such information.
Public health activities
Public health providers should (PHC, 1995c):

- promote and monitor the International Code of Marketing of Breastmilk Substitutes.

Personal health care activities
Personal health care purchasers and providers should:

- promote and monitor the International Code of Marketing of Breastmilk Substitutes
- ensure that no breastmilk substitutes are provided free or subsidised in any part of the health care system.

Promote family and whanau wellbeing
The key strategies to promote family and whanau wellbeing, and parent support, and skills development programmes for all families and whanau that include the promotion of safe infant care practices are to:

- deliver well child/tamariki ora services that provide appropriate care, support and skills development to children and their family/whanau including:
  - the promotion of key messages for safe infant care practices (see Appendix 1)
  - early detection and intervention in postnatal depression
  - the provision of home visiting to all new parents
  - facilitating parent education or support groups and networks
- maximise the positive effects of the local social and physical environment on the health of children, young people, parents, other caregivers, and families or whanau.

Epidemiology
The epidemiology of SIDS in relation to tobacco smoking and breastfeeding has been discussed on pages 22–23 and 31–33 respectively. This section will discuss the epidemiology of other important safe infant care practices.

Bed-sharing
Bed-sharing was identified as a fourth major risk factor for SIDS in 1992 (Mitchell et al, 1992a). Further analysis has revealed that the risk of SIDS is four to five times greater for infants of mothers who smoke and share their bed with their infant compared with infants of mothers who neither smoked nor shared the bed (Scragg et al, 1993).
Infant bed-sharing is a common practice. The New Zealand Cot Death Study found that the proportion of control infants who usually bed-shared in the previous two weeks was 65 percent in Maori, 74 percent in Pacific Islands people and 36 percent in Europeans. Twenty-six percent of SIDS deaths were explained by bed-sharing (alone or jointly with smoking) among infants of mothers who smoke. Three percent of SIDS deaths were explained by bed-sharing among infants of non-smoking mothers. There is also significant variation in smoking practices between Maori and non-Maori ethnic groups. Consequently it has been estimated that 54 percent of Maori SIDS deaths and 21 percent of all non-Maori SIDS deaths can be attributed to the joint and separate effects of bed-sharing and maternal smoking when exposed to both risk factors (Scragg et al, in press).

Scragg and others (in press) concluded that the majority of SIDS deaths that are attributed to bed-sharing occur among infants of smoking mothers. A policy which advises all infants not to bed-share is estimated to potentially save an extra three percent of SIDS compared with 26 percent for a policy focused only on infants of smoking mothers. If public attitudes are favourable to bed-sharing, a general message for all infants not to bed-share could be counter-productive if it jeopardised a targeted message to infants of mothers who smoke.

Consequently the key message is: If you smoke, or smoked during pregnancy, sleeping your baby in their own bed helps protect against SIDS. This statement should not be interpreted as indicating that bed-sharing where the mother is a non-smoker is safe or protective against SIDS, as advocated by some researchers (McKenna et al, 1993; Gantley et al, 1993). The New Zealand Cot Death Study results suggest that there may be a small increase in SIDS risk for infants of mothers who do not smoke, particularly if the infant shares a bed for five or more hours each day (Scragg et al, 1993). Further research into sleep behaviour and the changing aetiology of SIDS would be needed to clarify the risk.

**Sleeping infants on their back**

The front sleeping position was suspected for some years as a risk factor for SIDS (Froglatt, 1970; McGlashan, 1986; Nicholl and O'Catbank, 1988). The New Zealand Cot Death Study was the best case-control study with enough power to clearly quantify the risk.

The clarification of this risk factor made it possible to devise a health promotion programme (Mitchell et al, 1992b) which has had a considerable measure of success. This was a relatively easy and uncontentious strategy to implement, and despite some initial resistance, the side sleeping position has now been widely adopted (Figure 7). Back sleeping has a lower risk than side sleeping, but is not widely accepted as a safe infant care practice. The aim for the future must be to monitor the rate of the various sleeping positions and to increase the rate of sleeping on the back.
Given the now widespread acceptance of the side sleeping position in the New Zealand population, sleeping position should be monitored periodically with general reinforcement through health promotion programmes. Strategies will also need to be aimed at new parents and immigrants who have not heard the message. Once the “new” position of infant sleeping is part of the accepted culture, there will be less need to place a high priority on continued reinforcement.

The key message is: sleeping babies on their backs helps protect against SIDS.

**Dummy (pacifier) use**

The New Zealand Cot Death Study (Mitchell et al, 1993b) indicated that there may be a decreased risk of SIDS in infants regularly using a dummy. The mechanisms suggested for this finding included a number of factors, such as alterations in airway tone and patency, strengthening of the jaw muscles, and alterations in sleep levels.

There is very little supporting data, and the effect may relate to different sucking behaviour in infants who will die of SIDS compared with those who will not. Should this be a real effect, the potential benefit is very large because of the low current dummy usage rates in New Zealand. It is of some concern, however, that a recent paper from Brazil (Victoria et al, 1993) showed that dummy use at one month was associated with a threefold increase in cessation of breastfeeding by six months. The New Zealand Cot
Death Study also showed a relationship between dummy use and the earlier cessation of breastfeeding. However, there was no evidence to indicate a causal relationship. The questions that now need to be answered are: does dummy use actually interfere with the duration of breastfeeding, or do mothers use dummies at the time of weaning to help settle their baby? (Ford et al, 1994a).

There is widespread opposition to dummy use among groups involved in the promotion of breastfeeding. These groups point out that there are implications for the widespread adoption of the practice, as untoward secondary effects, such as reduction in breastfeeding, may occur. At the present time the use of dummies in breastfed infants is not supported by organisations with a focus on the promotion of breastfeeding, the Baby-Friendly Hospital Initiative, or by the World Health Organization (WHO, 1989).

No clear evidence-based public health message about the use of dummies (pacifiers) can be recommended at this stage.

**Safe thermal environment**

SIDS was first related to infant overheating by Bacon and others (1979). A number of subsequent studies (Stanton, 1984; Ponsonby et al, 1992; Fleming et al, 1990; Nelson et al, 1989) have looked at the association and found evidence to support the theory that overheating plays a part in at least a proportion of SIDS cases. Evidence for inappropriate bedding and clothing of infants has been found in some studies (Tuohy and Tuohy, 1990).

Several studies indicate that parents generally have adequate skills at wrapping their infants at night, but suggest that parenting practices could be improved so that parents take the presence of fever due to infection into account when putting their babies to bed, and ensuring that infants are unable to slip beneath the blankets of their cot (Wigfield et al, 1993; Bacon et al, 1991). This aspect also has implications for infants sharing a bed with parents.

No clear evidence-based public health message about the thermal environment can be made at this stage.

**Use of apnoea monitors**

There is a two- to five-times increased level of risk to subsequent siblings of a SIDS victim (Guneroth et al, 1990; Peterson et al, 1986; Beal and Blundell, 1988). The reduction in the SIDS rate has significantly reduced the number of infants in this group. The current practice for dealing with this extra risk is to offer parents the loan of an apnoea monitor for a variable time (usually eight to 12 months) after the birth of the infant. Most parents are pleased to use the monitor, as it offers reassurance, despite
occasional false alarms. There is some controversy over the role of apnoea monitors in the prevention of subsequent SIDS (Milner, 1985). While monitors have not unequivocally been proven to prevent SIDS, they are of great psychological benefit to most parents (Tonkin, 1985).

There is less disagreement in the scientific literature about the risk of subsequent SIDS in an infant who has presented to hospital with an ALTE (Acute Life-Threatening Event; see Glossary) (Oren et al, 1986). Some of these infants will be found to have epilepsy, gastro-oesophageal reflux, or a severe infection. A number will have no obvious cause for the event, and a subgroup of these infants will have a very high risk of subsequent SIDS. There is however a need for standardisation of the diagnostic approach to these infants, and the provision of monitoring after the event.

Apnoea monitoring has been shown to have a psychological benefit for parents of those infants who have had a previous ALTE (Ford et al, 1994b).

**Postnatal depression (PND)**

Postnatal distress and depression is experienced by many women in the first few months after their infant is born. Recent information from the Tresillian Family centres in Sydney (McVeagh, 1993) indicates that postnatal distress and depression is more common than often suspected, with 63 percent of mothers presenting to the family centres with infant feeding or "crying problems" scoring 14 or more (highly suggestive of postnatal depression) on the Edinburgh Postnatal Depression Scale (EPDS) (Cox, 1986) (see Appendix 6).

The New Zealand Cot Death Study showed an increased risk of SIDS in infants of mothers suffering from postnatal depression (Mitchell et al, 1992c). The mechanisms by which postnatal depression may relate to SIDS are not clear, but could include deficient nurturing, and a failure to respond to the infant's needs or to signs of illness. This association needs further investigation, but it is clear that PND needs to be detected early and managed appropriately for a number of reasons besides SIDS prevention.

One of the major difficulties in the detection of PND in mothers is that the symptoms are often insidious and the infant is often identified as the problem, so that appropriate and timely management is not instituted. The EPDS is a well validated screening tool and should be used more frequently in high-risk groups of mothers. Adequate training needs to be provided to community health nurses (Kaitiaki, Kaiawhina, Plunket, and Public Health), practice nurses, and midwives. Liaison with community mental health teams is an essential part of ensuring that PND, once detected, is managed well.
Key messages

Key messages relating to tobacco smoking and breastfeeding have already been identified.

The key messages for safe infant care practices are:

- If you smoke, or smoked during pregnancy, sleeping your baby in their own bed helps protect against SIDS
- Sleeping babies on their backs helps protect against SIDS

Well child/tamariki ora services

Well child health promotion and well child care services provide the essential infrastructure for promoting infant health. The provision of these services has been demonstrated to result in improved outcomes (PHC, 1995a).

A link between SIDS and the provision of well child care services has been described in New Zealand (Ford et al, 1988; Ford et al, 1994c). A home visiting programme in the United Kingdom is claimed to have reduced the numbers of SIDS (Carpenter et al, 1983). The delivery of key SIDS prevention messages utilising primary health care, well child care and pregnancy and childbirth services has been demonstrated to result in a reduction in SIDS (Mitchell et al, 1992b).

As recommended in the PHC’s advice to the Minister of Health on Parenting (PHC, 1995a) emphasis is placed in these guidelines on home visiting, parent groups, and the development of child health information and programme management systems.

For further information regarding home visiting and parent group activities see Appendix 6.

Public health activities

Public health provider activities should (PHC, 1995c):

- Whanau wellbeing and parent support and skills development programmes
  - Promote the establishment of parent groups including: play groups, coffee clubs, baby whanau groups, self-help education groups, mothers’ clubs, fathers’ groups (Rissel, 1994).
  - Develop well child health promotion programmes through an active partnership with communities, young people, parents, families, whanau/iwi, and other Maori community groups.
• Promote awareness of the need for increased parental support from extended family and whanau after the baby is born.

• Convene meetings with health workers and relevant community/iwi groups and schools to discuss the strategies outlined in these parenting guidelines.

• Facilitate and support the development of community groups that provide support for mothers with infants.

• Use mass media to encourage participation in parenting strategies (ie, smokefree promotion, breastfeeding support, playgroup, home visiting for mothers with infants).

• Encourage the involvement of other agencies and organisations with the delivery of parenting programmes.

• Promoting key health messages

- Promote in partnership with the community (using the appropriate context, medium and language) key health messages for children, young people, parents and families/whanau utilising national health education resources and other approved material. Priority should be given to delivering these activities to Maori and Pacific Islands people as part of a comprehensive well child health promotion programme.

  Activities should include:

  * **Group methods**
  - hui
  - seminars/lectures/conferences
  - peer group discussion
  - development of parent self-help activities.

  * **Social marketing and use of media**
  - periodic campaigns
  - radio and television
  - newspapers and local magazines
  - stickers, pamphlets, information sheets, newsletters and posters
  - T-shirts
  - video distribution.

- Support the use of existing resources, and facilitate the participation of communities, children, parents, iwi/whanau and other Maori community groups in the development of well child health promotion activities.

- Utilise currently catalogued and new PHC health education materials as part of local public health programmes.

- Utilise the PHC's guidelines for the development of health education materials.

- Participate in the national health education approved provider network.
• Population-based child health surveillance information systems

Priority should be given to developing population-based child health surveillance information systems and working with personal health care services to facilitate the development of intensive home visiting support services to higher-risk mothers and their families/whānau (see Services for families and whānau in difficult circumstances).

Personal health care activities

The PHC has recommended (PHC, 1995a) that the regional health authorities purchase the following well child care services:

• Health promotion, parenting support, and skills development including home visiting, group sessions, and development of support networks for all parents of children under four years of age, with a visiting schedule varied according to assessed need and initial contact with parents occurring during the last trimester of pregnancy.

• Screening (including developmental, vision, and hearing screening), immunisation, and parent/child support and education, for all children under 14, to coincide where possible with the delivery of immunisation.

• Surveillance and support for at risk families and for children and adolescents at risk of abuse or neglect.

• Population-based management systems for well child care co-ordination and the follow-up of those not accessing services.

Well child care/tamariki ora services should:

• Promote safe infant care practices at every appropriate contact, including the value of back sleep position, avoiding bed-sharing among smoking parents, breastfeeding and smoking cessation, through adolescent and youth parenting education programmes, pregnancy classes, and new parent groups.

• Promote the establishment of parent groups, including: play groups, coffee clubs, baby whānau groups, self-help education groups, mothers’ clubs, and fathers’ groups.

• Promote awareness of the need for increased parental support from extended family and whānau after the baby is born.

• Support the development and maintenance of a well child information system data base according to agreed data definitions, which enables tracking and follow-up of children and the national merging of data to monitor and analyse the state of the public health.

• Ensure the delivery of home visiting services to mothers with infants, and of weekly visits for those mothers and infants with identified special needs (Appendix 7).

• Facilitate and support the development of community groups that provide support for mothers with infants.

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• Utilise currently catalogued and new PHC health education materials as part of local public health programmes.

• Provide primary health care, well child care, and pregnancy and childbirth services that provide appropriate care, support, and skills development to children, pregnant women, mothers, fathers, and their family/whanau, including:
  – provision of universal home visiting programmes, and
  – facilitating parent groups and networks.

• Provide training in health promotion and SIDS prevention to paediatric and primary health care services.

• Support the development and implementation of in-service (staff development) programmes which encourage all staff providing antenatal, maternity, and infant health services to deliver appropriate messages on safe infant care practices.

• Promote the importance of developing and empowering parent and volunteer run programmes including parent support groups and self-help education courses.

• Develop population-based child surveillance systems that ensure the delivery of preventive services to children, parents, families, or whanau at higher risk of adverse health outcomes (Appendix 7).

Local social and physical environment
The local social and physical environment significantly impacts on parents’ ability to support and nurture healthy children’s and young people’s development. The creation of a supportive environment for families requires that local government policies address the special needs of young parents and caregivers caring for children on incomes that are relatively low compared with those from previous and future periods in their life. The availability, and geographical distribution of, public transport and other essential public amenities should be considered in relation to the needs of young families (PHC, 1995a).

Local government (territorial authorities, unitary authorities, and regional councils) has a significant role in public health, much of it statutory. As the level of government closest to the community and given its responsibilities for communities (Section 37k, Local Government Act, 1974), local government can make a significant contribution to improving and protecting the public health through policy, planning, and service delivery (PHC, 1995a).

Local communities themselves provide considerable support for families through churches, marae, parent groups, early childhood and school committees, and programmes operated by voluntary organisations such as iwi/whanau community groups, the Maori Women’s Welfare League, La Leche League, Scouts and Guides Associations, Barnados, Plunket, and Parents Centres. The facilitation of the development of local groups is a fundamental public health strategy.
The PHC has recommended that child and family guidelines should be developed for local government, regional public health services, and developers that describe strategies to maximise the positive effects of the local social and physical environment on the health of children, young people, parents, other caregivers, and families or whanau (PHC, 1995a). It is anticipated that the development of these guidelines would be an appropriate role for the Public Health Group, Ministry of Health.

Public health activities

Public health providers should (PHC, 1995c):

- promote policy development processes at the local level that explicitly consider the implications of policy on the health and welfare of children and families
- audit policy and planning decisions of local government (district plans and resource consents) to ensure that consideration is given to their impact on the health and welfare of children and families
- promote wide acceptance of the need to create supportive environments for children and families.

Services for families and whanau in difficult circumstances

The key strategies are to:

- identify, on a population basis, those pregnant women and newborn infants in difficult circumstances and at higher risk of adverse health outcomes
- deliver intensive home visiting and other support services to mothers, their infants, and families/whanau in difficult circumstances.

Epidemiology

As mentioned earlier there is evidence that home visiting by personal health care services is an important strategy to reduce SIDS. There is also significant evidence supporting the use of home visiting support programmes for mothers and infants to prevent child abuse and other adverse health outcomes (Olds and Kitzman, 1990). Those programmes should be offered to all mothers, with an increased level of support (ie, weekly visits) for those at higher risk of adverse health outcomes. These programmes have shown increased benefit when commenced during pregnancy (Larson, 1980).

There is no documented evidence that intensive home visiting programmes will reduce SIDS. Intensive support programmes for families and whanau in difficult circumstances are, nevertheless, important for delivering the key messages to hard-to-reach groups and for improving the conditions in which behaviour change can occur.
There is no appropriate key health education message for this programme. All the key messages apply.

The Policy Guidelines for Regional Health Authorities (Minister of Health, 1995a) require regional health authorities to purchase surveillance and support services for at-risk families and for children and adolescents at risk of abuse and neglect. There is significant evidence that families in difficult circumstances will benefit from intensive home visiting programmes.

Consultation on the PHC’s advice to the Minister of Health on Parenting (PHC, 1995a) supported targeted services but not at the expense of the provision of universal well-child care services for all parents with young children. The approach described below supports the provision of well-child care home visiting services to all parents but with additional services for those identified as being at higher risk of adverse health, education, and social outcomes.

The State of Hawaii has recently funded state-wide delivery of such a health intervention service. The programme is contracted to a range of non-government organisations that serve different ethnic and geographical communities. The cost of the service is kept low by the needs assessment process, flexibility in the visiting schedule according to need and the use of para-professional home visitors. Four levels of home visiting are undertaken at weekly, fortnightly, monthly, or quarterly intervals according to assessed need (Hawaii Department of Health, 1992).

Public health activities

The programmes require population-based surveillance of all pregnancies and births and the systematic identification of those who should be offered an increased level of service. There should also be systematic surveillance of children to ensure that they continue to receive the appropriate well-child care services.

The provision of population-based child health surveillance information and management systems is a well child priority for all public health service providers. Legislation requires all new births to be notified to the Medical Officer of Health, and the Health Information Privacy Code 1994 (Privacy Commissioner, 1994) allows disclosure of information for the purposes of identifying those who would benefit from health education. Public health providers could play an important role in the development of targeted family support services in all districts.

Public health providers should (PHC, 1995c):

- contribute to the development of population-based district registers of all second trimester pregnancies and births
- contribute to the development of mechanisms that identify on a population-basis those pregnancies and births at higher risk of adverse health outcome
• contribute to the development of targeted parenting and family/whanau support services in each district as described below.

**Personal health care activities**

The PHC has recommended (PHC, 1995a) that the regional health authorities give consideration to the purchase of a targeted intensive weekly home visiting service, commencing at birth, for higher-risk infants, their parents, families, and whanau.

These intervention services for higher-risk families should adopt the best practice standards suggested by the many evaluations of early interventions with new parents. The flexible criteria below allow service implementation to meet the needs of various social and ethnic communities, and provide an opportunity for innovation (PHC, 1995a).

### Criteria for successful intervention with families in difficult circumstances

- Services are initiated prenatally or at birth.
- There is initially universal population-based intake of all new parents from a defined geographical area.
- A universal needs assessment is made using a standardised protocol to systematically identify those new parents most in need of services due to the presence of various factors associated with increased risk of child maltreatment and other poor health outcomes.
- All higher risk parents are offered services in a positive, voluntary manner.
- Home visiting is the core service offered.
- There is creative outreach (eg, persistent, positive outreach for at least three months) to build trust in accepting services.
- Services are offered intensively (eg, at least once a week).
- Services are offered over a long period (such as three to five years).
- Services are family-centred, addressing the needs of the child within the context of the family and recognising the adults in the family as the primary decision makers.
- Services focus on supporting the parent as well as on supporting parent-child interaction and child development.
- Services include an emphasis on child health and linkages to a health care system (eg, well child checks and immunisation).
- Services include an emphasis on school readiness either directly or by offering linkages to other school readiness services (eg, Parents as First Teachers, Home Instruction Programme for Preschool Youngsters).
• Service plans are tailored to the needs of the individual family, with problem solving to address immediate service needs first and then a long-term focus on self-sufficiency and empowerment.

• Home visitors are selected because of personal characteristics (eg, non-judgmental, compassionate, culturally appropriate and selection by the ethnic community, ability to establish trusting relationships, previous experience as a parent etc).

• All workers receive continuing, intensive professional supervision to assure service quality (eg, two hours of supervision weekly for home visitors; five to six home visitors per supervisor).

• Worker caseloads are limited.

• The overall focus on service delivery in the area is on integration with other services (eg, a single agency may offer the home visitor services, but the overall effort is a collaborative one which builds on existing resources in the area).

Adapted from: Healthy Families America, Criteria, April 1993.

Further information is provided in Appendix 7. Further resource material from Healthy Start and Healthy Families America is available from child health advisors or managers of the Ministry of Health and regional health authorities.
Service Delivery

Health promotion and disease prevention services for children and their families or whanau are delivered by both personal health care and public health services. In preparing these guidelines the PHC has been aware that they could be found useful by primary health care workers such as community health workers, well child nurses and medical practitioners, and those working in early childhood education.

Public health services

Public health services are directed at populations. They include health surveillance, investigation and intervention, and health promotion through population-based health promotion and other strategies. The 1994/95 Policy Guidelines for the PHC state that the purchase of public health services does not include screening services delivered to individuals or health education services which assist individuals to understand their particular disease and the treatment options open to them (Minister of Health, 1994a).

In the context of these SIDS guidelines, and well child care generally, public health services purchased by regional health authorities do not include home visits or well child clinics. The promotion of new mother support and self-help education groups may be purchased in some public health contracts, but generally these groups are best facilitated and supported by well child or primary health care services. The public health services will include:

• population-based health promotion services using the Ottawa Charter strategies as described above, and
• population-based child health surveillance information systems that actively monitor, and where appropriate co-ordinate, the delivery of services to children and their families in defined populations.

Primary health care services

Personal health care services include disease prevention and health promotion activities. The well child/primary health care services purchased by regional health authorities include:

• well child checks for children under four years of age, including developmental, vision, and hearing screening, and parenting support
• school health services
• immunisation services
• surveillance and support services for at risk families and for children and adolescents at risk of abuse or neglect.
Health promotion plays an important part in the delivery of primary health care services. Most nurses and community health workers are familiar with the Ottawa Charter and use it in the delivery of services to children and their families or whanau. General practitioners are also becoming increasingly aware of the place of health promotion in their practice. There will also be many opportunities for these primary care workers to undertake wider health promotion activities in their local communities or at a regional or national level.

Early childhood education services

In recent years early childhood education services have played an increasing role in the provision of parenting education and support services to the parents of infants. Services include parent educator home visiting, play groups, and baby whanau groups. Te Kohanga Reo, Parents Centres, and other services also often include infants in their programme. Some of these services actively use SIDS prevention strategies and promote relevant key messages. The PHC believes that these services may find these guidelines useful.
Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>Acute Life-Threatening Event (ALTE)</td>
<td>This used to be called “Near-miss SIDS”, but it is increasingly apparent that not all such events will go on to SIDS, and a number are due to other well-defined events, such as seizures or inhalation of stomach contents.</td>
</tr>
<tr>
<td>Adolescence</td>
<td>The transitional phase in human development which occurs between childhood and adulthood. An adolescent is defined by the World Health Organization as within the 10 to 19 age group.</td>
</tr>
<tr>
<td>Apnoea</td>
<td>A long pause between breaths or in breathing.</td>
</tr>
<tr>
<td>Asphyxia</td>
<td>Injury or death due to interference with normal breathing.</td>
</tr>
<tr>
<td>Baby-Friendly Hospitals Initiative (BFHI)</td>
<td>The Baby-Friendly Hospitals Initiative is a World Health Organization breastfeeding promotion which aims to promote breastfeeding through support of the breastfeeding mother and her newborn infant, within the hospital setting.</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>The scientific study of the distribution and determinants of health-related states or events in specified populations.</td>
</tr>
<tr>
<td>Exnuptial</td>
<td>Refers to children born to unmarried parents.</td>
</tr>
<tr>
<td>Fertility rates</td>
<td>The number of children born per thousand women of reproductive age (or defined age bands) in a defined population.</td>
</tr>
<tr>
<td>Health promotion</td>
<td>The process of enabling people to increase control over and to improve their health.</td>
</tr>
<tr>
<td>Incidence</td>
<td>The number of new cases or deaths that occur in a given period in a specified population.</td>
</tr>
<tr>
<td>Iwi</td>
<td>Tribe.</td>
</tr>
<tr>
<td>Marae</td>
<td>Area set aside for the practice of Maori customs, usually associated with permanent physical structures.</td>
</tr>
<tr>
<td>Mortality</td>
<td>Death.</td>
</tr>
<tr>
<td>Nuptial</td>
<td>Refers to children born to married parents.</td>
</tr>
<tr>
<td>Ottawa Charter</td>
<td>The charter developed and adopted by the first international conference on health promotion held in Ottawa, Canada, in November 1986. This charter defines health promotion as the process of enabling people to increase control over and to improve their health.</td>
</tr>
<tr>
<td>Parity</td>
<td>The number of stillbirths and live infants to which a woman has given birth.</td>
</tr>
<tr>
<td>Population attributable risk</td>
<td>The incidence of disease in a population that is associated with (attributable to) exposure to a particular risk factor. It is often expressed as a percentage.</td>
</tr>
</tbody>
</table>
Postnatal  Occurring after birth.

Postneonatal mortality rate  The number of infant deaths per 1,000 live births which occur between 28 days and one year after birth.

Prenatal  Occurring before birth.

Prevalence  The number of instances of a given disease or other condition in a defined population at a designated time. Prevalence includes both new and existing instances of a condition.

Prone  Lying on the stomach.

Qualitative measures  Use of words or diagrams to attempt to describe what has occurred.

Quantitative measures  Use of numbers to attempt to measure what has occurred.

Rate  The frequency with which a health event occurs in a defined population.

Risk  The probability of harmful consequences arising from a hazard.

Risk factor  An aspect of personal behaviour or lifestyle, an environmental exposure, or an inborn or inherited characteristic that is associated with an increased risk of a person developing a disease.

Sociodemographic  Measures of the social statistics of a population.

Socioecologic  Incorporating both the environment and effects of human society.

Substance abuse  Drug taking, usually drugs of addiction.

Sudden infant death syndrome  The sudden death of an infant under one year of age which remains unexplained after a thorough case investigation including performance of a complete autopsy, examination of the death scene, and review of the clinical history.

Supine  Lying on the back.

Tangata whenua  The indigenous people of a country or land area.

Te Tiriti o Waitangi  The Treaty of Waitangi.

Tino rangitiratanga  Maori self-determination, the right to be in charge of one’s own destiny.

Ukaipo  A Maori health promotion programme encouraging a return to traditional child-rearing practices, with a particular emphasis on breastfeeding.

Whanau  Relationships that have blood links to a common ancestor. Usage in this report is wider and includes a number of groups with common bonds and goals.

WHO  The World Health Organization.

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References


55 Preventing Sudden Infant Death Syndrome (SIDS)


Appendix 1
Key Messages to Prevent SIDS

Approved key health education messages to prevent sudden infant death syndrome are provided here to allow you to promote them in your community using different health education methods. You may wish to supplement the available resources by developing your own:

- articles in magazines or on radio
- audio-visual presentations for groups, or
- print material that is more appropriate for your audience.

Having a smokefree pregnancy and a smokefree home helps protect against SIDS

Supporting information

- Do not smoke, especially if you are pregnant. Smoking is a risk to your baby both during pregnancy and afterwards. The more that mothers and fathers smoke, the greater the risk to their baby.

- The toxins in smoke can harm babies in many ways. Development is stunted in the womb and this may affect how babies react to stress later. They also get sick more often and more severely.

- The number of babies dying of SIDS is unlikely to reduce much more until a lot more babies have a smokefree start to life. Smoking and babies just don’t mix.

- If both parents smoke, ACT NOW and stop together. You will never have a better reason. If you want help to stop, ask your doctor or nurse about smokefree programmes near you. Many people who do give up find it is a lot easier than they thought. These tips may help:
  - Go smokefree with others for support.
  - Make a smokefree plan and stick to it.
  - Use the money you save on things for you and your baby. (One packet per day smokers will save over $2,000 a year.)
Breastfeeding your baby helps protect against SIDS

• New Zealand research has found that breastfeeding helps protect against sudden infant death syndrome (SIDS). Breast milk alone is the best food and drink for the first six months.

• Breastfed babies get sick less often and less severely. This may be why they are less at risk of SIDS. Breast milk is more than a food. It also helps to regulate body functions and improve immunity to illness.

• Most women can breastfeed, and want to. Once established, breastfeeding usually goes well and is a pleasure. Many mothers need help when they begin breastfeeding, especially if the baby is their first. However, there are ways to avoid or overcome most problems and there are people willing and able to help. Ask someone who is experienced and sympathetic if you would like advice. Having contact with other women who are breastfeeding can also be very helpful.

• Be patient as you and your baby learn to breastfeed. Ask to feed your baby as soon as possible after birth. Ask your midwife to be with you for the first feed, to show you the best feeding position for your baby (face-on to your breast) and how your baby needs to suck to ensure milk supply and prevent sore nipples.

• Keep up your milk supply by letting your baby feed as often and for as long as they want to. From time to time your baby will need more than you expect. This does not mean you are running out of milk. After a few days of extra feeds your increased milk supply will meet your baby’s growing needs.

• Accept help from mothers to make things easier. Breastfeeding takes a lot of time at first. Even though you are the only one who can breastfeed your baby, there are many ways others can provide support and practical help.

• Ask for help early if you have a problem so that it can be overcome. Breastfeeding groups (La Leche League) and midwives can help. So can your Plunket nurse, Kaitiaki, Maori community worker, practice nurse, doctor, or lactation consultant.

If you smoke, or smoked during pregnancy, sleeping your baby in their own bed helps protect against SIDS

• New research shows there is an increased risk of sudden infant death when babies of mothers who smoke – or who smoked during pregnancy – sleep in the same bed with others. This combination is a major risk to New Zealand babies but it is not yet known why.

• It is still not known how safe it is for babies of non-smoking mothers to sleep in bed with others. If there is a risk, it is probably small.
Supporting information

- Sleep your baby on their back, not on their tummy (unless you have been advised to for medical reasons). SIDS happens during sleep. The risk is greatest for babies who sleep on their tummies.

- In the past, parents were advised not to sleep their babies on the back for fear that they might be sick and choke. Research now shows that this does not happen.

- If your baby is on their side, make sure the underneath arm is well forward to stop your baby rolling forward. The side position becomes unsafe if your baby rolls onto their tummy during sleep.

- Tummy sleeping is unsafe because it may make breathing difficult for some babies. Also, in this position babies risk getting too hot, especially if they slip under blankets or their faces get covered.

- Make sure your baby’s face is always well clear of the bedclothes.
Appendix 2

PHC Health Education Resources as at April 1995

Sudden Infant Death Syndrome

**PHC Resources**
- HE4875  Cot Death Prevention Programme
- HE4897  Help Prevent Cot Death (leaflet)
- HE4898  Help Prevent Cot Death (poster)
- HE4899  Help Prevent Cot Death (sticker)

**Other**
"Cot Death – You can reduce the risks." Available from Family Education Services, 117 Clyde Rd, Christchurch (15 cents per leaflet).

Smokefree

**PHC Resources**
- HE4900  Go Smokefree For You and Your Baby
- HE4901  Smokefree Children (fact sheet)
- HE4249  Ten Steps to Fresh Breath (to be reviewed)
- HE5105  Smokefree Babies – The Next Generation (video)

**Other**
"Love is ... not smoking to protect a child" (poster). Available from Family Education Services, 117 Clyde Rd, Christchurch. $2 per poster.

ACT NOW. Smokefree child resource, designed to support health professionals in fostering changes in smoking by pregnant women and families of infants and young children. Available only with training from Family Education Services, 117 Clyde Rd, Christchurch.


Breastfeeding

**PHC Resources**
- HE4880  Breastfeeding (poster)
- HE4881  Breastfeeding – Giving your baby the best you’ve got (booklet)
- HE4889  Your Breasts (fact sheet)
- HE4890  Expressing Milk Breastfeeding Facts
- HE4891  Answers to Breastfeeding Questions
- HE4892  Sore Breasts Breastfeeding (fact sheet)
- HE4893  Sore Nipples Breastfeeding (fact sheet)
- HE4894  Inverted Nipples Breastfeeding (fact sheet)
Pregnancy and well child health promotion

PHC Resources

HE4146 Your Pregnancy (booklet)
HE0602 Health and Development Record

Other

Your Changing Baby – helping your baby from birth to 6 months. Available from Family Education Services, 117 Clyde Rd, Christchurch. 15 cents per leaflet.

Note

These resources were available at the time of printing these guidelines. These and other resources should be available from the public health unit of your local Crown health enterprise.
Appendix 3

Additional Reading

Sudden infant death syndrome


Tobacco control


Reid P. *Tihei Mauri Ora (Quitting for Life).* Newmarket, Auckland: Te Hotu Manawa Maori, 1993.


Breastfeeding


Well child care


Nutrition


Other


Appendix 4
Tobacco Control

Smoke-free Environments Act 1990

The purpose of Part I of the Smoke-free Environments Act 1990 is to prevent, so far as is reasonably practicable, the detrimental effects of smoking on the health of any person who does not smoke, or who does not wish to smoke, inside any workplace or in certain public enclosed areas (Section 4).

The following aspects of Part I have implications for preventing the exposure of tobacco smoke to pregnant women and infants:

- All employers must have a written policy on smoking that protects non-smokers from exposure to tobacco smoke in the workplace (Section 5). As a minimum, smoking shall not be permitted in:
  - lifts or office areas where more than one person works
  - at least half the total area of a cafeteria or lunchroom
  - in any part of the workplace to which the public normally has access.
- Patients in hospital should not be exposed to tobacco smoke from other patients (Section 6).
- There shall be no tobacco smoking on passenger service vehicles (buses) or internal flights of passenger aircraft (Sections 8 and 9).
- Smoking is to be permitted only in smoking areas in waiting rooms, passenger lounges, or on ships and trains (Sections 10 and 11).
- Smoking is allowed in areas set aside for the consumption of liquor (Section 12).
- At least half the seating for meals in licensed premises or in restaurants shall be designated non-smoking by prominent signs (Sections 12 and 13).

Part II Tobacco products control

The purpose of Part II of the Smoke-free Environments Act 1990 is:

- to reduce the social approval of tobacco use, particularly among young people, by imposing controls on the marketing, advertising, or promotion of tobacco products and their association through sponsorship with other products and events, and
- to reduce some of the harmful effects of tobacco products on the health of users by monitoring and regulating the presence of harmful substances in the products and in tobacco smoke.

The following aspects of Part II have implications for preventing smoking by young people, pregnant women, and mothers, and can be monitored by health workers and the public:

- There should be no publishing or transmission of tobacco product advertisements in New Zealand unless the book, magazine, newspaper, film, radio, or television transmission originated outside New Zealand (Section 22).

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Advertisements by tobacco retailers and vending machines should:
- display their name outside
- not allow tobacco products to be visible from outside
- not display any sign after 1 January 1995 that indicates that tobacco products are for sale.

Tobacco products shall not be sold to people under the age of 16 years.

There are many other provisions in Part II, but these aspects are relatively easily controlled by the officers designated to enforce the Act.

**Enforcement by smokefree officers**

Regional public health services (usually part of your local Crown health enterprise) are required to:
- monitor and enforce Part I of the Smoke-free Environments Act 1990, by appointed officers with appropriate knowledge and skills, and
- investigate and report to the Ministry on complaints referred to it concerning Part II of the Smoke-free Environments Act 1990.

**Action by health workers and the public**

The Director-General of Health enforces Part II of the Smoke-free Environments Act 1990 through the appointment of smokefree officers who generally work in Crown health enterprises (CHEs). These smokefree officers usually rely on receiving information concerning an offence before acting (reactive mode), but they may also actively seek evidence for a prosecution through other public health workers (active surveillance).

An important aspect of Part II is enforcement of under-age sales. (It is not illegal for under-16s to purchase tobacco, but it is illegal to sell to them.) To date there have been few prosecutions in relation to under-age sales. Successful programmes in the United Kingdom and the United States have used children, with parental permission, to obtain evidence and to be witnesses under supervision.

Tobacco products are addictive. Any person selling tobacco to under 16s is selling illegally.

**Smoking cessation**

Cessation is only one change option for smokers, but an important one. A useful guide to the development of smoking cessation programmes is *The Handbook to Plan, Implement and Evaluate Smoking Cessation Programs for Pregnant Women* (Windsor et al, 1990). The following is a summary of advice given on methods of smoking cessation.
Stages and methods of cessation and maintenance

There are four possible intervention phases:

- preparing to quit
- stopping (at least 48 hours)
- maintaining cessation (post quitting)
- preventing smoking relapse for recent ex-smokers (since first visit).

Preparing to stop methods

- **Nicotine fading (tapering)** – asking the smoker to gradually reduce her nicotine intake until a target stopping date and on that day she abruptly stops smoking.
- **Monitoring smoking behaviour** – asking smokers to monitor their smoking behaviour by keeping a diary for 24 hours.
- **Contracting** – asking the smoker to make a public commitment in the form of a written contract.
- **Social support/buddy contract** – having a contract with a non-smoking partner.
- **Restricted or “no smoking” zone** – restricting the places where she smokes by removing ashtrays and matches from all but one specified area.
- **Breathing/relaxation** – teaching deep breathing as one response to dealing with smoking urges.
- **Alternative behaviours** to smoking should be suggested.

Stopping

The first cessation phase is short – 48 hours. Experts agree that cessation for at least two full days is necessary before it can be stated that a “quit attempt” has occurred. Before the cessation day, all cigarettes and smoking materials must be removed from the household. Friends and family should have been told not to offer the woman a cigarette even if she requests it. Emphasise the use of social support and a cessation partner.

Maintenance and relapse prevention methods

- **Social support** – each former smoker may want a support partner (a non-smoker) and a plan for partner involvement.
- **Boost self-efficacy and self-reinforcement** by encouraging the smoker to think of herself as a non-smoker.
- Health care staff should provide **positive patient reinforcement and assistance** to all women who stop smoking.
- **Physician/nurse/midwife reminders** such as a signed letter within seven days of the first prenatal visit to all recent quitters and smokers.
Relapse prevention
Programmes should include a strategy for helping those who have recently stopped to resist and avoid relapse triggers and to maintain their non-smoking status.

Relapse reversal
Programmes should include help for patients who relapse. Stress that a slip does not mean “failure”. Some people “practise” stopping smoking before they finally make it. People who slip regularly or return to regular smoking can be helped. Set new cessation dates and strengthen the weak links in their cessation strategies.

Modes of programme intervention

• One-on-one counselling during prenatal care supplemented by a self-help manual or written materials have been documented to be effective methods for pregnant smokers.

• Telephone follow-ups after initiation of a self-help or counselling programmes increase cessation rates.

• Group sessions during pregnancy for smoking cessation alone are generally not well attended and this approach is best done as part of other prenatal group activities.

• Referral to smoking cessation programmes run by other agencies in your community.

• Non-smoking policy by your agency.

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Appendix 5
Promotion of Breastfeeding by Health Care Services

The decision and ability to continue with breastfeeding is influenced by many factors. Some of these are beyond the control of mothers. Health services strategies to promote breastfeeding need to include service policy, clinical practice, and community development approaches (Department of Health, 1991; WHO, 1989).

Service policy

Key activities include:

- adopting an explicit policy for promoting and supporting breastfeeding
- communicating this policy to all those responsible for managing and providing maternity services (ie, providing oral briefing for new staff, manuals, guidelines, and supervisory staff)
- developing a mechanism to monitor prevalence of breastfeeding for all interested groups and professions
- assessing whether all staff are aware of the importance and advantages of breastfeeding and the maternity service provides breastfeeding policy
- providing specialist training in lactation management for specific staff
- having staff or counsellors with specialist training in lactation management available at all times
- promoting mother support groups during and following pregnancy
- developing a policy that encourages lactation support groups to visit the birthing unit
- providing specialist support and counselling on how to initiate and maintain breastfeeding to women who have:
  - undergone Caesarean section
  - delivered prematurely
  - delivered low birthweight infants
  - infants who are in special care for any reason
- adopting a policy whereby “discharge packs” with baby and personal products do not contain anything that might interfere with the successful initiation and establishment of breastfeeding, eg, feeding bottles and teats and infant formula.

Pregnancy and childbirth practices

Key activities include:

Antenatal

- At the first antenatal contact, advise women of the importance and advantages of breastfeeding. Actively encourage and support this choice, and supply mothers with health education materials (eg, the booklet Breastfeeding – Giving your baby the best you’ve got).
• Record intention to breastfeed in antenatal records. Perform a breast examination and document breastfeeding history.

• Communicate all information to labour, delivery and postnatal staff. Give special attention and support to women who have not breastfed before, or who have had problems.

• During the antenatal period inform women of how to prepare for breastfeeding and how to ensure its successful initiation and establishment.

• Encourage use of health education materials.

• Ensure women are informed of the importance of their own nutrition during pregnancy and lactation (PHC, 1995e; 1995f). Discourage use of alcohol, tobacco, excessive caffeine, non-medical drugs, and unnecessary medication.

Labour and delivery

• Promote natural childbirth where appropriate.

• Take into account a woman’s decision to breastfeed when deciding on the use of an analgesic, sedative, or anaesthetic.

• Encourage close mother/child contact and encourage a mother to breastfeed her child within half an hour of delivery.

• If a woman has not breastfed before, or has experienced problems, the midwife should ask to stay for the completion of the first feed to assist and encourage. (This may not be appropriate for all cultures when the father is present.)

Note: Clinical situations may exist where breastfeeding is not recommended, such as where either parent is known to be HIV positive. This decision would be based on the individual circumstances and made between the mother and her primary health care provider.

Postnatal

• Practise rooming-in. That is, infants remain with their mothers throughout their stay. If rooming-in applies only during daytime hours, infants are at least brought frequently (every 3–4 hours) to their mothers at night.

• Instruct mothers how to position their babies for breastfeeding.

• Place infant cots close to mothers’ beds.

• Promote frequent suckling and practise breastfeeding on demand.

• Teach women how to maintain lactation if they are separated from their infants.

• Restrict prelacteal infant feeding. That is, restrict any food or drink other than breast milk before breastfeeding has been established.

• Ensure that follow-up contacts and breastfeeding support contacts are established before a mother is discharged.
Community practices

Key activities include:

- Develop a written breastfeeding policy that is routinely communicated to all relevant health workers.
- Train health care staff in skills necessary to implement this policy.
- Promote the benefit and management of breastfeeding with pregnant women.
- Encourage giving infants no food, water, or drink other than breast milk until four months, unless medically indicated.
- Practise breastfeeding on demand.
- Encourage the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital.

Key information for health workers

Key activities include:

- Most women are able to breastfeed and need to be prepared antenatally for the realities of breastfeeding and to be encouraged to contact support people.
- Initiation of breastfeeding can be impeded by anaesthesia, strong sedation, prolonged labour, surgical intervention, stress, discomfort, or fatigue.
- Mother and child contact immediately following birth and frequent sucking at the breast are the best stimuli for milk secretion.
- Correct position of the infant at the breast is important. It facilitates feeding, ensures adequate milk supply, and helps prevent sore or cracked nipples and breast enlargement.
- Milk is produced in response to suckling. To balance supply and demand, an infant needs to feed as often as it demands.
- Colostrum, the first milk, is of particular nutritional and health value to the infant. It is rich in proteins and fat soluble vitamins and contains anti-infective properties.
- Under normal circumstances, the infant requires no water or other food whatsoever during the first two to four days after birth, while lactation is being established. NB: Added water increases jaundice and decreases breastfeeding.
- If other food or drink is given before complementary feeding is nutritionally required at four to six months it may interfere with the maintenance of breastfeeding.
- Objective and consistent information and education is available on breastfeeding from the PHC/Ministry of Health. Print materials are available to be given to mothers.
• Maternity services are encouraged to ensure that staff with specialised training in lactation management are available day and night to advise breastfeeding women during their stay in hospital.

• Support for breastfeeding in the community and workplace should be fostered.

(Department of Health, 1991; WHO, 1989)
Appendix 6
Home Visiting and Parent Support Groups

The delivery of well child care services consists of a number of activities. These include:

- home visiting
- facilitation of parent groups
- well child clinics and open days (immunisation, screening, and advice)
- community-based child and family resource centres (specialised support and advice).

There is now increasing evidence to support priority being given to the delivery of home visiting and parent support group activities. Health sector agencies providing home visiting services need to work closely with other home visiting programmes such as Parents as First Teachers.

Home visiting

A link between SIDS and the provision of well child care services has been described in New Zealand (Ford et al, 1988, Ford et al, 1994b). An intensive home visiting programme in the United Kingdom is claimed to have reduced the numbers of SIDS (Carpenter et al, 1983).

There is now significant evidence supporting the use of home visiting support programmes for mothers and infants to prevent child abuse and other adverse health outcomes (Olds and Kitzman, 1990). These programmes should be offered to all mothers, with an increased level of support (ie, weekly visits) for those at higher risk of adverse health outcomes. These programmes have been shown to have increased benefit when commenced during pregnancy (Larson, 1980).

- Home visiting by trained workers (including nurses, community health workers, parent educators, social workers, and volunteers) has repeatedly been shown to be effective in improving health, education, and social outcomes (PHC, 1995a).
- Home visiting has been also been shown to improve pregnancy and childbirth outcomes (Morrell, 1990).
- Home visiting is more effective if it is begun early, preferably during pregnancy (Larson, 1980).
- Initial visits are usually devoted to building trust, assessing family needs, and where necessary providing help with immediate needs such as obtaining emergency food supplies, completing applications for housing, or resolving crises in family relationships.
- All home visiting programmes have similar aims, including:
  - providing positive affirmation of parenting skills and provision of support
  - helping parents access community resources
- providing guidance on child development, learning, behaviour, and play
- providing guidance on health issues such as nutrition, infant care, tobacco smoke etc
- providing guidance on safety-proofing the house and immediate environment
- responding to parents' questions and concerns
- monitoring and discussing the child's progress
- assisting the personal development of parents.

- Facilitating involvement in, and the development of, parent mutual support groups.

Parent support groups

The development of parent mutual support groups is an important step in the development of both personal and community empowerment (Rissel, 1994). Parent groups can reduce feelings of isolation by bringing neighbours together, encouraging sharing of information and resources among families, and identifying the changes that parents want to see in their neighbourhoods.

The importance of the development of parent support groups has not always been realised. Emphasis in well child care delivery has often been placed on screening and developmental surveillance to the detriment of this very important activity.

Parent groups are of several types:

- informal neighbourhood groups (such as coffee clubs)
- self-help education groups
- special interest groups (such as breastfeeding support groups)
- play groups
- formal committees and mothers' clubs.

Home visitors can play an important role in establishing parent groups. During home visiting parents can be invited to meetings of other parents, a leaflet can be given, and follow-up made by telephone. The meetings usually involve only mothers, but increasingly fathers are involved.

Once established the groups can last for many years and develop their own life. It is important for the home visitor to step aside early in the process. In this way one home visitor can facilitate the development of a large number of parent groups in a given area.

Some groups can be used for the delivery of health education. These are often called self-help groups. The programmes are organised by the parents, with the home visitor providing assistance with obtaining speakers and resources.
Resources


Edinburgh Postnatal Depression Scale (EPDS)

The Edinburgh Postnatal Depression Scale (EPDS) has been developed to assist primary care health professionals to detect mothers suffering from postnatal depression: a distressing disorder more prolonged than the “blues” (which occur in the first week after delivery) but less severe than puerperal psychosis.

Previous studies have shown that postnatal depression affects at least 10 percent of women, and that many depressed mothers remain untreated. These mothers may cope with their baby and with household tasks, but their enjoyment of life is seriously affected and it is possible that there are long term effects on the family.

The EPDS was developed at health centres in Livingstone and Edinburgh. It consists of ten short statements. The mother underlines which of the four possible responses is closest to how she has been feeling during the past week. Most mothers complete the scale without difficulty in less than five minutes.

The validation study showed that mothers who scored above a threshold 12/13 were likely to be suffering from a depressive illness of varying severity. Nevertheless, the EPDS score should not be carried out to confirm the diagnosis. The scale indicates how the mother has felt during the previous week, and in doubtful cases it may be usefully repeated after two weeks. The scale will not detect mothers with anxiety neuroses, phobias, or personality disorders.
Instructions for users

1. The mother is asked to underline the response which comes closest to how she has been feeling in the previous seven days.
2. All ten items must be completed.
3. Care should be taken to avoid the possibility of the mother discussing her answers with others.
4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.
5. The EPDS may be used at six to eight weeks to screen postnatal women. The child health clinic, postnatal check-up, or a home visit may provide suitable opportunities for its completion.

Edinburgh Postnatal Depression Scale (EPDS)

J L Cox, J M Holden, R Sagovsky

Department of Psychiatry, University of Edinburgh

Name:
Address:

Baby’s Age:

As you have recently had a baby, we would like to know how you are feeling. Please UNDERLINE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed.

I have felt happy:

Yes, all the time
Yes, most of the time
No, not very often
No, not at all

This would mean: “I have felt happy most of the time” during the past week. Please complete the other questions in the same way.

In the past 7 days:

1. I have been able to laugh and see the funny side of things

   As much as I always could
   Not quite so much now
Definitely not so much now
Not at all

2. I have looked forward with enjoyment to things
   As much as I ever did
   Rather less than I used to
   Definitely less than I used to
   Hardly at all

3.* I have blamed myself unnecessarily when things went wrong
   Yes, most of the time
   Yes, some of the time
   Not very often
   Not at all

4. I have been anxious or worried for no good reason
   No, not at all
   Hardly ever
   Yes, sometimes
   Yes, very often

5.* I have felt scared or panicky for no very good reason
   Yes, quite a lot
   Yes, sometimes
   No, not much
   No, not at all

6.* Things have been getting on top of me
   Yes, most of the time I haven’t been able to cope at all
   Yes, sometimes I haven’t been coping as well as usual
   No, most of the time I have coped quite well
   No, I have been coping as well as ever

7.* I have been so unhappy that I have had difficulty sleeping
   Yes, most of the time
   Yes, quite often
   Not very often
   No, not at all

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8.* I have felt sad or miserable
  Yes, most of the time
  Yes, quite often
  Not very often
  No, not at all

9.* I have been so unhappy that I have been crying.
  Yes, most of the time
  Yes, quite often
  Only occasionally
  No, never

10.* The thought of harming myself has occurred to me
  Yes, quite often
  Sometimes
  Hardly ever
  Never

Response categories are scored 0, 1, 2, and 3 according to increasing severity of the symptoms.

Items marked with an asterisk are reverse scored (ie, 3, 2, 1 and 0). The total score is calculated by adding together the scores for each of the questions.

Users may reproduce the scale without further permission providing they respect copyright (which remains with the British Journal of Psychiatry) by quoting the names of the authors, the title, and the source of the paper in all reproduced publications.

Appendix 7
Risk Approach to Infant Care

Naku Enei Tamariki (NET) screening process

Naku Enei Tamariki (NET) is a community based network to support mothers with greater need in the greater Hutt Valley. Although NET was based on the “Acorn Club” model, it differs in that where Acorn Clubs were centrally based and staffed by professionals, NET aims to provide neighbourhood support through home visiting and development of community support networks for mothers.

The indicators used by NET to identify higher risk mothers are shown below:

<table>
<thead>
<tr>
<th>Naku Enei Tamariki (NET) Assessment of Higher Risk Mothers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is this the patient’s first experience with babies?</td>
</tr>
<tr>
<td>2. Has she changed address more than twice in the past twelve months?</td>
</tr>
<tr>
<td>3. Has she ever had psychiatric treatment either as an inpatient or an outpatient?</td>
</tr>
<tr>
<td>4. Is she opposed to attending antenatal classes or did she drop out of classes?</td>
</tr>
<tr>
<td>5. Has there been any evidence of a poor relationship with previous children (violent behaviour or neglect)?</td>
</tr>
<tr>
<td>6. Was a termination considered, or is she considering adopting the child out?</td>
</tr>
<tr>
<td>7. Has there been any indication that the mother suffered parental violence or neglect as a child? (Did she have an unhappy childhood herself?)</td>
</tr>
<tr>
<td>8. Are there any emotional problems which may affect the mother’s relationship with the new baby? (Such as inappropriate responses to baby’s needs, or detachment from child.)</td>
</tr>
<tr>
<td>9. Are there any intellectual problems which may affect the mother’s relationship with her baby? (eg, doesn’t seem to be able to respond to simple instructions about child care.)</td>
</tr>
<tr>
<td>10. From your observations, are the mother’s expectations realistic? Is she unduly stressed by the child’s behaviour?</td>
</tr>
<tr>
<td>11. Does she have very little family support, or inappropriate support and no other support structures?</td>
</tr>
<tr>
<td>12. Is she poor, inadequately housed, and without transport?</td>
</tr>
<tr>
<td>13. Is she very young – chronologically, emotionally, intellectually?</td>
</tr>
<tr>
<td>14. Does she need help in developing self-esteem, self-confidence, and coping skills?</td>
</tr>
<tr>
<td>15. Does she need help in finding out about services available or how to use them?</td>
</tr>
<tr>
<td>16. Is she suffering from depression?</td>
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<tr>
<td>17. Is she in an abusive marital relationship?</td>
</tr>
<tr>
<td>18. Is there a problem with substance abuse?</td>
</tr>
</tbody>
</table>

(Source: Naku Enei Tamariki, personal communication, May 1995)
Hawaii’s Healthy Start Family Support programme is a home visiting family support programme for at risk families of newborn babies. All births in hospitals are systematically screened using 15 risk indicators (Phase 1). Those mothers identified as at risk are interviewed using the Family Stress Assessment (Phase 2) developed by Kempe (1976). Clinical judgement is also used where mothers are considered high risk but would not have been otherwise identified by the screen.

High risk families are then offered a schedule of weekly home visits by trained workers.

**Healthy Start - Screening from case notes (Phase 1)**

1. Marital status – single, separated, divorced.
2. Partner unemployed.
3. Inadequate income or no information regarding source of income.
4. Unstable housing.
5. No phone.
6. Fewer than 12 years of formal schooling.
7. Inadequate emergency contacts (eg, no immediate family contacts).
9. Late (after 12 weeks) or no prenatal care.
11. History of psychiatric care.
12. Abortion unsuccessfully sought or attempted.
13. Relinquishment for adoption sought or attempted.
14. Marital or family problems.
15. History of current depression.

Phase 2 assessment interviews are undertaken if:

- 7 of the 15 risk factors cannot be answered from the information in the maternity record
- at least two of the factors are present
- if any one of the following factors exist – single mother, no prenatal care (or late care), or abortion sought or attempted.

(Source: Hawaii Department of Health, 1992)
Healthy Start – Family Stress Assessment by Interview (Phase 2)

1. Parent was repeatedly beaten or deprived as a child.
2. Parent has a criminal or mental illness or substance abuse history.
4. Parent with low self-esteem, social isolation, depression, poor coping or problem solving skills.
5. Multiple crises or stresses (eg, generally chaotic life, marital discord, multiple separations, threats of divorce, recent significant loss(es), poor work stability, debts, recent or frequent moves, overcrowded living conditions).
6. Violent temper outbursts in either parent toward child or others.
7. Rigid and unrealistic expectations of child’s behaviour.
8. Harsh punishment of child (eg, physical punishment in early months of life; child seen to be deserving of punishment, current/frequent spanking, in extreme; sadistic punishment).
9. Child is difficult or provocative, or is perceived to be by parents (eg, any frequent misbehaviour that causes anger in the parent such as excessive crying, temper tantrums, hyperactivity, aggressiveness, destructiveness, negativism, defiance, etc).
10. Child is unwanted or at risk of poor bonding (eg, premature baby, out-of-wedlock baby, baby almost therapeutically aborted or relinquished, any baby with hospitalisation in first six months of life causing prolonged separation, step child or adopted child).

Note: This is only a summary of a sophisticated assessment tool that requires appropriate intensive training before use.

(Source: Family Stress Checklist (Kempe, 1976))

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