

A POLICY PAPER
ON
PUBLIC HEALTH CARE ISSUES
FOR
LOW INCOME FAMILIES WITH CHILDREN

A Report to The Combat Poverty Agency
and the Irish National Organisation for the Unemployed

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Acknowledgements

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“ Even in the richest countries, the better off live several years longer and have fewer illness than the poor. These differences in health are an important social injustice, and reflect some of the most powerful influences on health in the modern world. People’s lifestyles and the conditions in which they life and work strongly influence their health and longevity” (Wilkinson, Marmot, 1998)

“ The persistence of child poverty in rich countries undermines both equality of opportunity and commonality of values. It therefore confronts the industrialised world with a test both of the ideals and of its capacity to resolve many of its most intractable social problems” (UNICEF, 2000).

1. Introduction - the context

The persistence of health inequalities in developed countries despite increasing levels of national wealth has led to a revived interest in this topic. This paper is being written in the context of a growing concern about the level of child poverty and its impact on the health status of children in Irish society.

Public expenditure on health care in Ireland is one of the lowest among the EU member states. This has implications for child health services. A recent UNESCO Report places Ireland thirteenth in a league table for ‘absolute’ child poverty, with a rate of 21.4% of children living in poverty. Ireland also fares badly on the ‘relative’ child poverty league. It is placed 18th with a ‘relative’ poverty level of 16.8% (UNICEF, op. cit., p7). For a comprehensive account of child poverty in Ireland see Nolan, (2000).

“Child poverty in Ireland undermines the fundamental rights of children, including their access to education, housing and health services” (UN, 1998).

1.1 Poverty and low health status

There is a well-established link between health status and socio-economic status (SES). This link has been well established by international research. The poor get sick more often and die younger than those in the higher socio-economic groups. Poverty directly affects the incidence of ill health, it limits access to affordable health care and reduces the opportunity for those living in poverty to adopt a healthy lifestyles. Health exclusion is a major dimension of poverty and social exclusion.

In Britain, the government sponsored Black Report (Black et al., 1980) commissioned to explain the trends in health inequalities clearly identified the relationship between poverty and poor health status. This report documented the fact that in Britain there were large differentials in both mortality and morbidity favouring the higher social classes and that these had persisted over time despite improvements in health and social services.

Since then other British studies have shown that the health gap has worsened.

The report identified:

- the existence of clear differences in mortality between the different socio-economic classes;
- evidence of inequalities in the utilization of health services, in particular the preventative services;
- the extent to which those at the bottom of the socio-economic scale get sick more often and have a lower life expectancy than better off groups in society;
- the extent to which people/groups living in poverty experienced difficulty in accessing health care and in adopting healthy lifestyles.

A recent analysis commissioned by UNICEF illustrates the extent to which the persistence of child poverty in the developed world undermines the fundamental rights of children, including their access to health services (UNICEF, op cit.).

Studies linking poverty with low health status generally adopt a *socio-economic* model of health and its inequalities. This model identifies the key determinants of health status (Figure 1) and identifies the impact of socio-economic structures on inequality, including health inequality (Figure 2).

This model adopts a *broad front approach* reflecting scientific evidence that “health inequalities are the outcome of causal chains which run back into and from the basic structure of society” (Acheson, 1999).

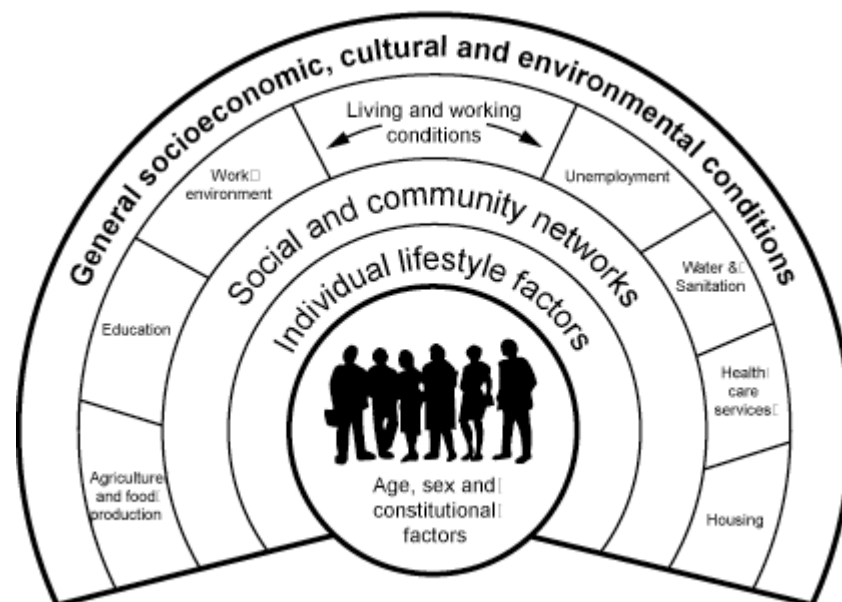


Figure 1 - The main determinants of health (Source: Acheson, 1999)

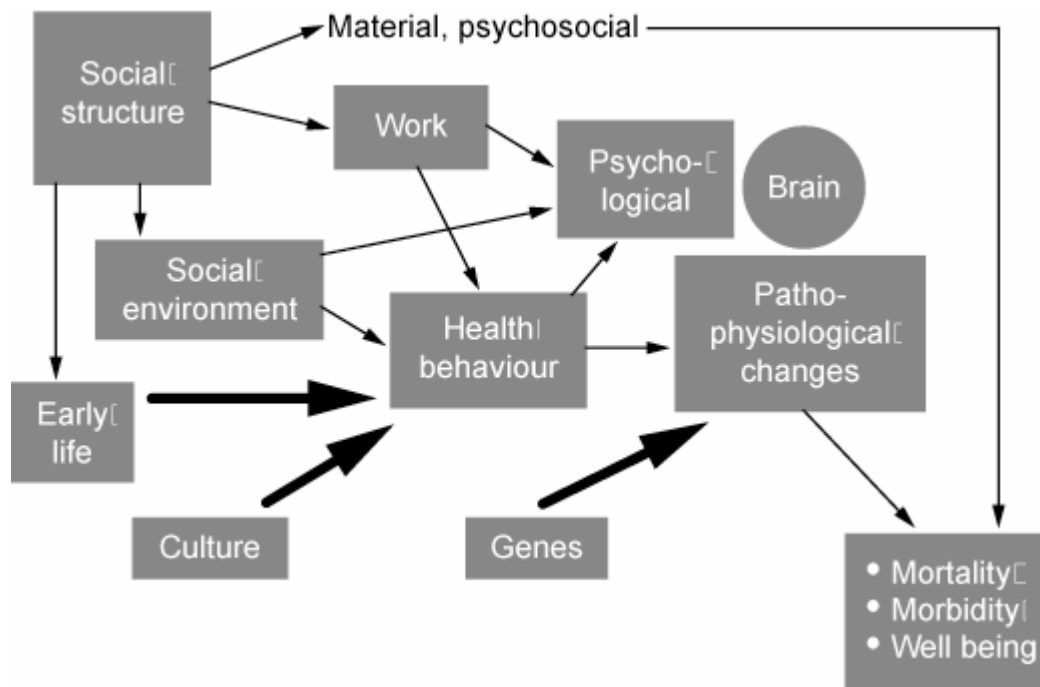


Figure 2 - Socioeconomic circumstances and health outcomes (Source: Acheson, 1999)

1.2 Inequality and low health status

Recent research has focussed on the relationship between neo-liberal/market oriented politics, income inequality and lowered social cohesion, which, in turn limits health capabilities (Coburn, 2000). This research concludes that health status is affected by inequality rather than wealth.

2. The Social / Economic Determinants of Health

“People’s social and economic circumstances strongly affect their health throughout life, so health policy must be linked to the social and economic determinants of health” (Wilkinson and Marmot, op. cit.).

The nature and extent of medical care provided by the health services can have a significant impact on the health status and well-being of individuals, however “the

social and economic conditions that affect whether people become ill are more important for health gains in the population as a whole” (Wilkinson, Marmot, op. cit., p8). These authors summarise the scientific evidence linking health status with social and economic circumstances. They illustrate how the social gradient in health “reflects material disadvantage and the effects of insecurity, anxiety and lack of social integration” (ibid.). Their analysis points towards a very broad approach to achieving good health, incorporating policies for income maintenance, education, housing, employment etc. “Societies that enable all their citizens to play a full and useful role in the social, economic and cultural life of their society will be healthier than those where people face insecurity, exclusion and deprivation” (ibid.).

They have devised a list of the social and economic determinants of health. These include:

- Stress
- Early Life
- Social Exclusion
- Work
- Unemployment
- Addiction
- Food
- Transport

Government policy to address the problems associated with health inequalities needs to address these wider problems along with specific health related policy.

The key indicators of child well-being have been derived from this literature. These include:

- Child poverty
- Parental employment
- Housing problems
- Good diet
- Access to health care

- Health status, mortality
- Educational achievement
- Behavioural and social environment.

Based on this literature Nolan (2000) has identified four categories of child welfare:
These are

- Material Well-being
- Health and Survival
- Education
- Participation and Quality of Life

He goes on to suggest a list of possible deprivation indicators under the category of Health and Survival. These are:

- Mortality rate for children under 5
- Child Suicide
- Child pedestrian/bicycle deaths
- Birth rate for teenagers
- Children using alcohol or drugs
- Children on hospital waiting lists

Government policies to deal with the low health status of children in Irish society must target the wider social and economic determinants of health along with the above child deprivation indicators.

3. Access to health services

The Commission on Health Funding (1989) recommended that access to necessary health services should be available by reference to individual need, rather than, ability

to pay or geographical location. This recommendation was adopted in the National Health Strategy. In reality this objective is full of aspirations, but short on practical policy proposals. Equality of access to health care for all members of society is not the case in practice.

Recent research suggests that those with private health insurance have faster access to acute health services, and can afford to pay for the lifestyle changes necessary for good health, such as good diet or giving up smoking. It also shows that people living in rural areas face particular problems of access to the health services due to the difficulty and cost involved in travelling long distances to avail of health services. They also identify other less tangible barriers to health access such as lack of access to appropriate health information, advice, support and preventative services. They point to the difficulties experienced by those with poor literacy skills to access these services (The Combat Poverty Agency, 2000; Nolan, B , Wiley, M., 2000).

The Minister for Health and Children has addressed some of these issues in the recently launched “National Health Promotion Strategy 2000-2005”.

The aim of the Strategy is to improve the health and social gain of the disadvantaged and lower socio-economic groups by developing sensitive and appropriate health promotion programmes to meet their needs. The objectives of the strategy include proposals to will:

- Focus on the link between health promotion and the determinants of health;
- Provide information and data on socio-economic and environmental factors, lifestyle behaviours and health status;
- Identify the prerequisites needed at a national and regional level to support and sustain health promotion;
- Emphasise the role for inter-sectoral and multi-disciplinary approaches in the planning, implementation and evaluation of health promotion initiatives.

The Strategy includes a commitment to the “health proofing” of government policy in other areas to ensure that the determinants of health which are beyond the immediate

responsibility of the Department of Health and Children Department are considered in terms of their direct and indirect impact on health status.

The Child Health Strategy being drawn up by the Department of Health and Children should include specific proposals to *child proof* as well as *poverty proof* government policy.

In order to improve the access of children to health care government policy needs to focus on providing free access to health care to all children under eighteen years of age. This could be achieved by providing the Medical Card to all children regardless of the income of their parents.

4. Constitutional/legal responsibility for the provision of health services for children.

There is no specific provision of a right to health care contained in the Irish Constitution, Bunreacht na hEireann.

The Fundamental Rights section- Articles 40-44 guarantees a number of personal rights to all citizens. However the specific rights explicitly guaranteed in these articles of the Constitution have been the focus of judicial policy making since the 1960's. "The process of judicial interpretation and enforcement of implied and explicit constitutional rights have established new boundaries for Irish social policy" (Coughlin, 1998, p150). The Irish Supreme Court has significantly developed the fundamental rights section of the constitution " using Article 40.3. as the basis for a concept of undisclosed human rights" (Chubb, 1978, p77).

Article 40.3. states that:

The State guarantees in its laws to respect, and, as far as practicable, by its laws to defend and vindicate the personal rights of citizens.

The seminal judgement was *Ryan v. Attorney General* (1965) in which Mr Justice Kenny established that " there are many personal rights of the citizen which follow

from the Christian and democratic nature of the State which are not mentioned in article 40 at all” (Coughlin, op. cit., p151).

This approach was further developed by Mr Justice Walsh in 1974. In the case of *McGee v. Attorney General*, he argued that

“Articles 41, 42 and 43 emphatically reject the theory that there are no rights without laws, no rights contrary to the law and no rights anterior to the law. They indicate that justice is placed above the law and acknowledge that natural rights or human rights are not created by law but that the Constitution can confirm their existence and give them protection”¹.

Since that judgement the Supreme Court have defined a number of ‘unspecified rights’ from the Constitution, including, the right to bodily integrity, the right to work, the right to belong to a trade union, the right to marry, the right to a career, the right to free movement.

The Supreme Court have also adopted a very broad approach to their interpretation of the constitution, making reference to the preamble and to Article 45, the *Directive Principles on Social Policy* which outline the principles of social policy for the general guidance of the Oireachtas.

Article 45: 1. states that:

The State shall strive to promote the welfare of the whole people by securing and protecting as effectively as it may a social order in which justice and charity shall inform all the institutions of national life.

Article 45:4. states that:

The State pledges itself to safeguard with especial care the economic interests of the weaker sections of the community, and, where necessary, to contribute to the support of the infirm, the widow, the orphan, and the aged.

¹ [1974] I. R. 284.

While there is no reference to the right to health care in the Constitution, on the basis of the scope of judicial interpretation to date there is every reason to presume that a constitutional case seeking to establish the right to health care for Irish citizens would be successful. (The next section will discuss the rights based approach in more detail).

The Irish government is a signatory to a number of international agreements that specify a comprehensive set of rights, including the right to health care. These include:

- The UN International Covenant on Economic, Social and Cultural Rights (ICESCR)
- The European Convention on Human Rights
- The European Social Charter
- The UN Convention on the Rights of the Child.

However, in practice, the enforcement of social rights has proven to be much more difficult than the implementation of civil and political rights. Implementing social rights requires the redistribution of resources, which many regard as conflicting with property rights.

It has already been suggested that a constitutional case to establish the right to health care could be successful. The Irish Labour Party has adopted another approach. It recently published a Private Members Bill calling for a constitutional amendment to guarantee certain social and economic rights for all citizens. In particular, to secure acceptable levels of health care, education and accommodation.

5. A rights-based approach to the provision of health care

The insertion of economic and social rights into the constitution is in line with the 'rights' based approach to the provision of welfare services. The debate about the future of the modern welfare state has focussed on the 'social rights of citizenship'. However the philosophical and practical implications of developing social rights have rarely been debated in Irish public life.

The philosopher Raymond Plant has devised an argument for social rights based on four propositions about welfare rights. These are:

- that there is no categorical difference between social and economic rights and civil and political rights. He claims that the philosophical case for health care and other welfare services is no less reasonable than the case for civil rights, such as the right to free speech, the right of assembly, or the right to freedom from coercion or assault;
- social rights must be enforceable, they must be more than aspirations;
- the concept of enforceable social rights provides a new way of empowering citizens;
- social rights can be introduced through a range of mechanism, to suit different services and circumstances (Plant, 1992).

Two approaches for introducing social rights have been identified by recent research. One option is the enactment of a Social Charter (Lewis, Senevirtne, 1992), the other is the development of 'procedural rights' designed to suit different welfare services. These rights would not confer the right to services or benefits, but the right to 'fair treatment' for individuals in relation to their need for social services, including health services (Coote, 1992) ².

The recent debate about access to health care in Ireland along with the Labour Party proposal for a constitutional amendment to establish social and economic rights suggests that it is now opportune to debate the whole issue of social rights in Ireland.

² See individual chapters procedural rights to social welfare, health and community services in A Coote (1992).

6. Child Health in Ireland –what do we know?

Introduction

This chapter presents the available information on the health of children in Ireland. The links between poverty and poor health status in children have been clearly demonstrated in other countries and described earlier in this report. Because of significant gaps in the way in which the health of children and families is measured in Ireland, there is not sufficient information to confirm these findings to the same extent here. What is presented in this chapter is the evidence that is available on the health of children, and to a lesser extent families, and where possible its relationship to indicators of deprivation, such as social class, socio-economic group, educational level, and possession of a medical card. In this chapter, we also examine current health policies and how they address child and family health issues.

The rationale for this approach is as follows: In Ireland, hardly any health-related data are collected with the family as the unit of analysis. Data are collected at an individual level so most of the results in this chapter relate to children, with some relating to women in their role as mothers. Where health data are collected on children, data on income are never collected. Hence, it is not possible to perform analysis based on income, or even social class. Where socio-economic data and analysis are available, we have used them.

The information presented falls into a number of categories which are not on the same scale. These include: health-related behaviour of children or adults, health outcome indicators, measures of uptake of health services, focussing particularly on preventive health initiatives. With the exception of the section on Traveller health, we have found no other sub-group of the Irish population where a set of health-related data have been systematically collected to enable a detailed analysis to be carried out.

To present the data in a logical format, the results are grouped in the following sections: data for the antenatal period; data relating to the time of birth; data from the first year of life; data from later childhood. This is followed by a section on Traveller health. The final section contains an analysis of a child health initiative, “Best Health

for Children”, and how its approach might be more focussed to meet the special needs of children from low income families. The chapter closes with a summary.

A variety of different information sources have been used in this report. These include national reports produced by the Department of Health and Children, reports produced on subjects relevant to child health, reports produced by Departments of Public Health in health boards, and theses submitted for the Membership of the Faculty of Public Health Medicine of Ireland . It is important to point out that these latter two types of report often relate to local public health data only. Thus, data from these sources may not always be generalised to the national Irish population. In addition, the Medline database, the Yahoo internet search engine and also the Microsoft Explorer internet search engine were used.

Antenatal period

Ante-natal attendance

The following figure shows percentage of 'failure to attend' at an ante-natal clinic by socio-economic group. Unmarried mothers, unemployed and unskilled, along with non-classified, have higher than average levels of non-attendance.

Percentage 'No Ante-Natal Care' by Father's SEG (1986-'93)
 1903/421,792 (0.4%)

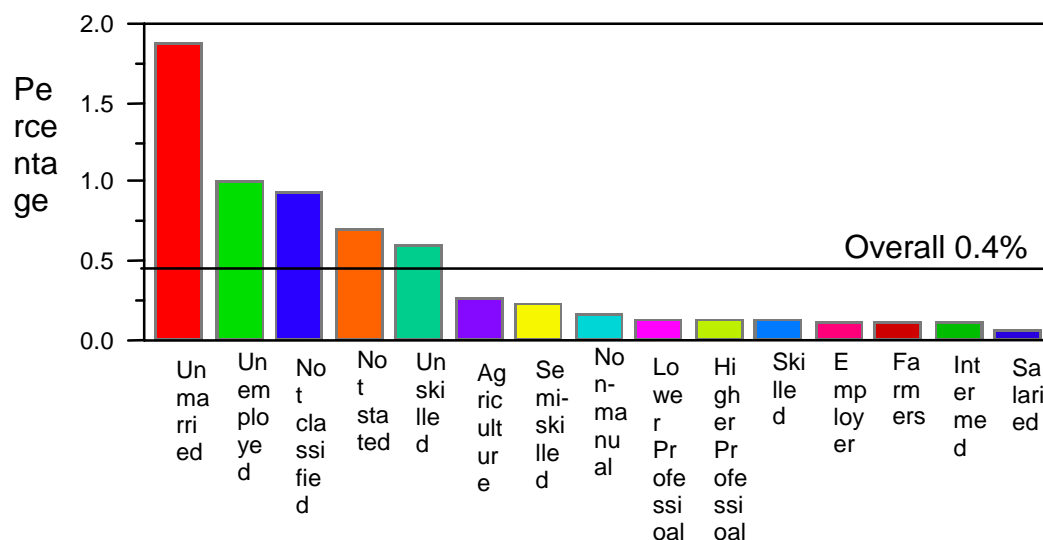


Figure 11: Percentage of 'no ante-natal care' by father's socio-economic group, Ireland 1986-1993. Overall average is indicated by horizontal line at 0.4%. (Source: national perinatal database, Department of Health & Children)

Folic Acid in Pregnancy and risk of NTDs

Ireland has a high rate of neural tube defects (NTD). Neural tube defects are congenital abnormalities (i.e. present at birth) of the central nervous system, the most common of which is spina bifida. Although the precise cause of NTDs remains unknown, there is evidence that many factors, including radiation, drugs, malnutrition, chemicals and genetic determinants, may adversely affect the normal development of the CNS. The role of folic acid in the prevention of NTDs is outlined below.

Figures from the EUROCAT Registry (a European registry of congenital abnormalities) for the years 1980-1994 show that the NTD rate in the 2 EUROCAT centres in the Republic of Ireland had rates of 14.7 (Galway) and 14.2 (Dublin), compared with a total EUROCAT rate of 10.1 per 10,000 births (EUROCAT, 1997). In the period 1980 to 1996 in the Eastern Health Board region, the proportion of babies with NTDs born to women who were not married was 29.5%, very much

higher than the proportion of all births which were to unmarried women during those years (personal communication, Dr Howard Johnson, Eurocat Registry, Dublin). No information is available from the registry on social class associations of NTDs. In this region, younger mothers had significantly higher rates of NTD affected births (McDonnell RJ, 1999).

Folic Acid is a B vitamin that is known to provide a high degree of protection against neural tube defects, such as spina bifida and hydrocephalus, present at birth. The protective value of folic acid occurs when it is taken periconceptionally (before conception or in the early stages of pregnancy). The protection is of the order of 72% for those women who have previously had a baby with an NTD (MRC Vitamin Study Research Group, 1991).

Since 1993, the Department of Health has promoted the use of periconceptional folic acid supplements. However, there is concern that many women of childbearing age, particularly those in vulnerable groups, are unaware of this recommendation or not following the advice.

In a community based survey of women aged 15 to 44 years in Dublin, knowledge of the benefits of periconceptional folic acid was found to be significantly associated with higher social class and higher educational level (Sayers et al, 1997a). Knowledge of the benefits of and actually taking folic acid periconceptionally were significantly associated with planned pregnancy and being married (Sayers et al, 1997b) and also with relative affluence, in studies of antenatal women attending Dublin maternity hospitals in 1996 and 1997 (McDonnell R, Johnson Z, Doyle A, Sayers G, 1999).

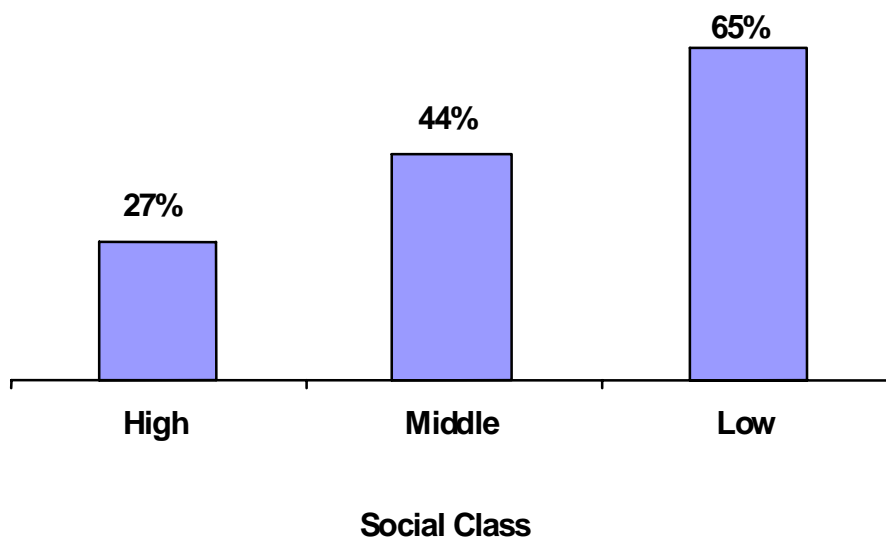
The current policy of promoting the use of peri-conceptional folic acid supplements is being disseminated through a television campaign. While this broad brush approach is necessary, more targetted campaigns, aimed at women with lower levels of educational attainment, most likely in low-income families, are necessary.

Smoking during pregnancy

A study conducted among women attending the public antenatal clinic of a Dublin maternity hospital found that smoking in pregnancy was associated with younger age, being unmarried, lower social class, being unemployed and having a lower level of education (Thornton, 1992). The rate of smoking was 50% in social classes 1-3, compared with a rate of 62% in social classes 4-6.

Another study of smoking in pregnancy conducted in an Irish county maternity unit found a more marked social class gradient (Mc Bride, 1985). The prevalence of smoking in social classes 1-2 was 27%, compared with 43% in social classes 3-4 and 65% in social classes 5-6 (Figure 12).

Figure 12: Percentage of women who smoke during pregnancy in high , middle and low social class groups



Source: Mc Bride, 1985

This study also compared attitudes to smoking in pregnancy in mothers with differing levels of educational attainment. Lower educational attainment correlates well with lower social class (Smoking and the Young, 1992). It was found that mothers who completed primary education only were more likely to believe that smoking in moderation was “alright for the foetus” compared to mothers who had completed secondary or third level education (Mc Bride, 1986). In mothers who only completed primary education, 50% believed that smoking in pregnancy was “alright for the foetus” compared to 34% of those who had completed secondary education and 22%

of those who had completed third level education (Mc Bride, 1986). These results are illustrated in Figure 13.

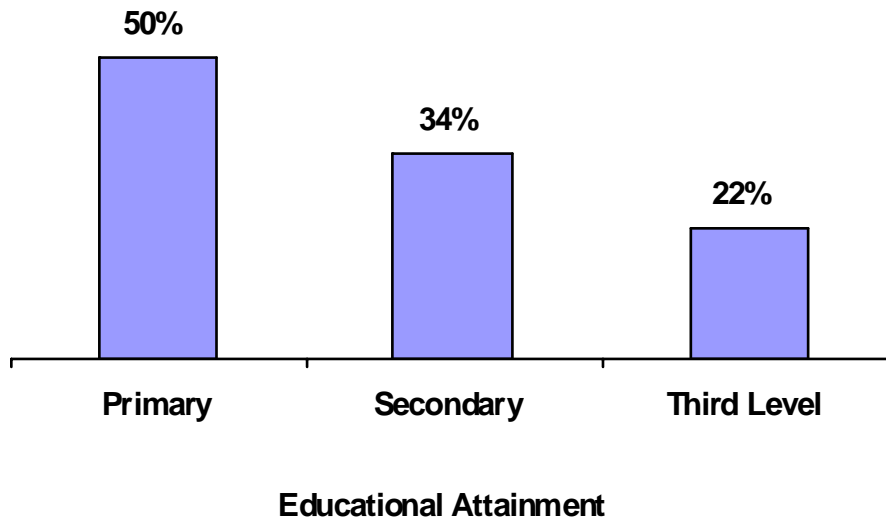


Figure 13: Percentage of Mothers Who Agree With The Statement That “Smoking in Moderation in Pregnancy is Alright for the Foetus”, By Level of Educational Attainment

Numerous studies have demonstrated the adverse effects of maternal smoking in pregnancy on pregnancy outcome. A report by the Royal College of Physicians (UK) in 1992 identified maternal smoking in pregnancy and infancy as the single most avoidable risk factor for foetal and infant mortality, and stated that passive smoking imposed a significant burden on the health of children.

Studies in different countries have found that women who smoke in pregnancy are more likely to be younger, single, of lower educational achievement and in unskilled occupations (Royal College of Physicians, 1992; Madeley et al, 1989; Alison et al, 1993; McKnight and Merrett, 1986). The male partner is also more likely to smoke.

Infants born to mothers who smoked during pregnancy tend to be of lower birth weight (by an average of 200 grams) and the effect is dose-related (Royal College of Physicians, 1992). Low birth weight is associated with higher risks of death and disease in infancy and early childhood. Smoking increases perinatal mortality

(stillbirths and deaths in the first week of life) – this increase is seen particularly among manual socio-economic groups (U.S. Department of Health and Human Services, 1980; Comstock et al, 1971). Smoking also increases the risk of spontaneous abortion, bleeding during pregnancy, and premature delivery (Royal College of Physicians, 1992; Johnston, 1981; U.S. Department of Health and Human Services, 1980). The effects of smoking in pregnancy extend well beyond infancy with a reduction in growth and educational achievement (Butler and Goldstein, 1973; Kristjansson, Fried and Watkinson, 1989; Naeye and Peters, 1984; Sexton, Fox and Hebel, 1990).

There is now strong evidence of an increased risk of sudden infant death syndrome associated with maternal smoking in pregnancy and also with postnatal exposure to tobacco smoke (Blair et al, 1996; Alm et al, 1998; Anderson et al, 1997; MacDorman et al, 1997; Brooke et al, 1997).

Passive smoking

In addition to the effects of smoking in pregnancy, infants and children are also at risk from passive smoking by their parents or other household members (Royal College of Physicians, 1992). Infants of parents who smoke are twice as likely to suffer from serious respiratory infection (Colley, Holland and Corkhill, 1974). Symptoms of asthma are twice as common in the children of smokers (Weitzman et al, 1990; Neuspiel et al, 1989; Gortmacker et al, 1982). One-third of cases of “glue ear” (chronic secretory otitis media, the commonest cause of deafness in children) are attributable to parental smoking (Royal College of Physicians, 1992).

In a study of infants attending for a 10 month developmental assessment in Dublin clinics, Lyons (1995) found that exposure to cigarette smoke was associated with a 4.9 times increase in the prevalence of hearing deficits, and 75% of the cases of hearing loss were statistically attributable to exposure to cigarette smoke.

There is a higher rate of smoking in adults in lower social classes. For males, 25% in social classes 1-2 smoke, compared with 37% in social classes 5-6. For females, 28% in social classes 1-2 smoke, compared with 38% in social classes 5-6 (Department of

Health and Children, Health Statistics, 1999). Thus children in lower income groups are more exposed to the risk of passive smoking.

The recent establishment of the Office for Tobacco Control offers an opportunity to bring all policy initiatives involving smoking under one umbrella. This offers a better chance than hitherto of lessening the health-damaging impact of smoking on children, particularly in low income families.

Perinatal Period

Low Birth Weight

Low birth weight (babies weighing less than 2,500gms at birth) is a well recognised predictor of subsequent poor health outcome. It is the most important factor which is linked to perinatal death. The babies of women in disadvantaged groups are more likely to have reduced growth rates before birth. In Britain, babies in social classes 4 and 5 have a birth weight which is on average 130 grams lower than that of babies with parents in social classes 1 and 2 (Office for National Statistics, 1998). A study carried out in the Eastern Health Board found that the best predictor of low birth weight was the proportion of the population covered by medical cards (Johnson et al, 1994).

Substantial social class differences in birth weight may be expected to generate inequalities in health in the future (South Eastern Health Board, 1998). Reduced growth in foetal life is associated with increased mortality and morbidity in the first year of life and throughout childhood. (The Scottish Low Birth Weight Study Group, 1992; Hack et al 1993). People who have low birth weight are at increased risk of cardiovascular disease and the disorders related to it in later life.

In a study of schoolchildren, it was found that very low birth weight children are more likely to be admitted to hospital because of respiratory illness and to use an inhaler than their peers. According to McLeod et al (1996), this may be related to being on a ventilator during the neonatal period.

An analysis of the national perinatal database (1986-1993) in relation to incidence of LBW and father's socio-economic group reveals a marked gradient in risk (Figure 7). This represents the relative risk ratio of LBW as a standardised incidence ratio with the national average shown as 100. Point estimates for SIR and 95% confidence intervals are shown. It is noteworthy that semi-skilled, unskilled and unemployed groups have a significantly higher risk of low birth weight, particularly when compared to births to professional groups.

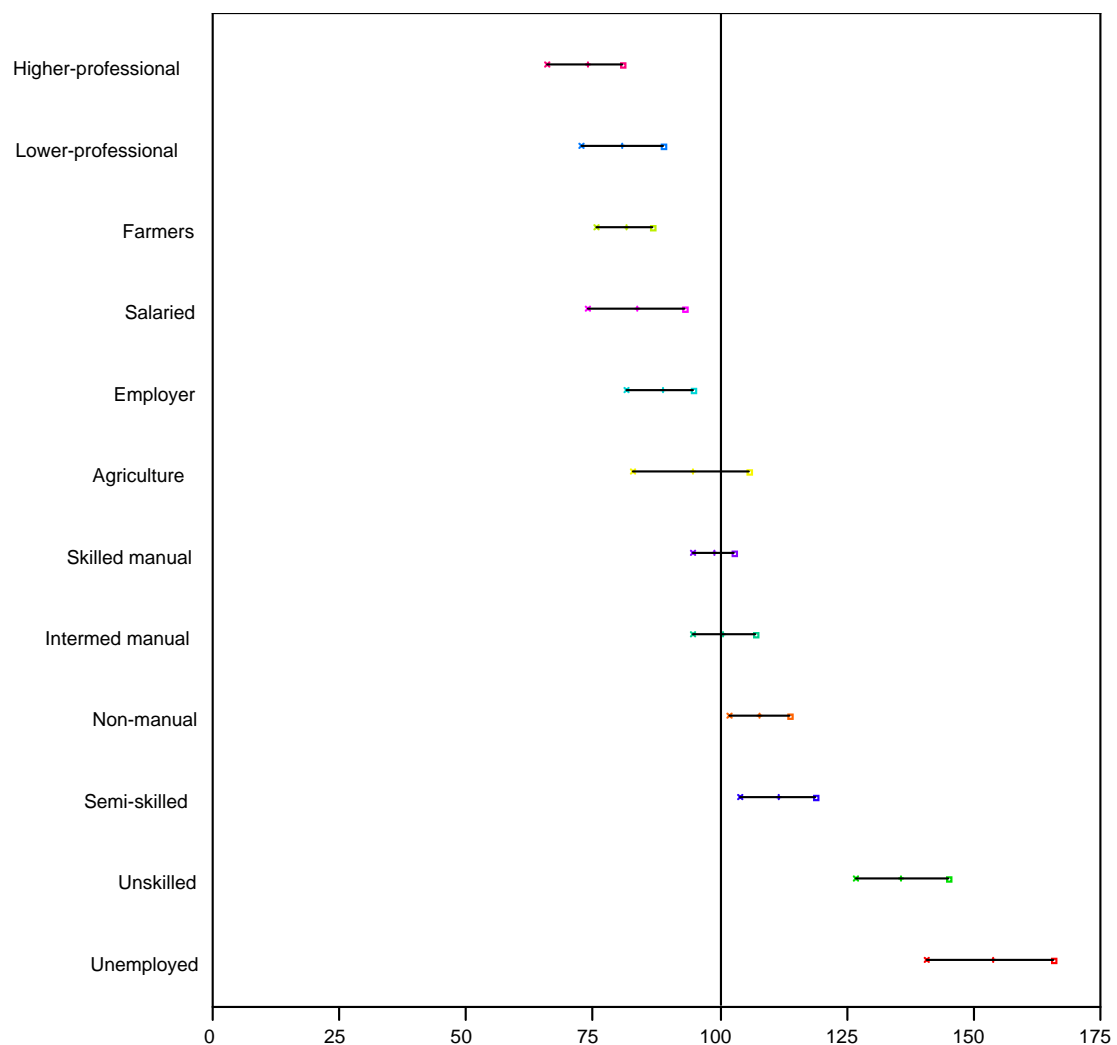


Figure 7: Plot of standardised incidence ratio (SIR) and 95% confidence interval for LBW by socio-economic group, Ireland 1986-1993. Overall average is shown by vertical line at 100. (Source: analysis of the national perinatal database, Department of Health & Children)

Stillbirths

The same socioeconomic gradient is evident from an analysis of the national perinatal database (1986-1993) in relation to stillbirths (see Figure 8) and preterm births (see Figure 9) and father's socio-economic group reveals a marked gradient in risk .

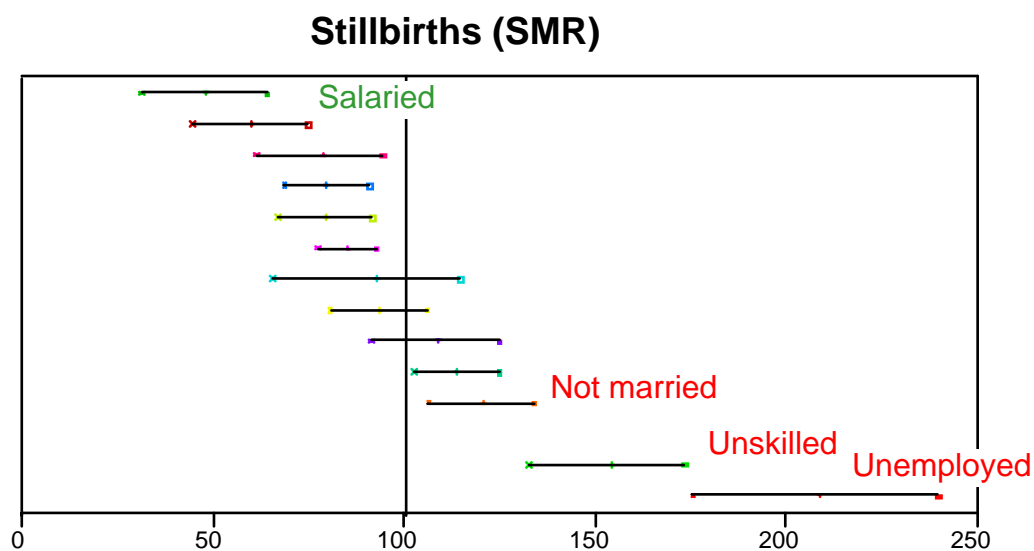


Figure 8: Plot of standardised mortality ratio (SMR) and 95% confidence interval for Stillbirths by socio-economic group, Ireland 1986-1993. Overall average is shown by vertical line at 100. (Source: analysis of the national perinatal database, Department of Health & Children)

Preterm births

And again for Preterm births (Figure 9).



Figure 9: Plot of standardised incidence ratio (SIR) and 95% confidence interval for Preterm births by socio-economic group, Ireland 1986-1993. Overall average is shown by vertical line at 100. (Source: analysis of the national perinatal database, Department of Health & Children)

Perinatal mortality

The *perinatal mortality rate* is regarded as an important index of the quality of obstetrical care in a given country. It is defined as the number of stillbirths, together with the number of deaths within the first seven days of life, per 1,000 live and stillbirths. The perinatal mortality rate in Ireland has declined considerably in the past 20 years, from 17.6 per 1,000 live and still births in 1978 to 10.6 in 1998. However, it is still high compared to other European countries. In 1995, the perinatal mortality rate in Ireland was 10.6, compared to a European Union average of 7.7 (Health Statistics, 1999). Ireland's rate was the highest of the 15 countries.

In 1993, the perinatal mortality rate (for singleton births) was 8.3, but when analysed by father's occupation, the rate was higher in the unskilled (8.8) and unemployed (10.9) than in the higher and lower professional groups (7.1 and 6.3 respectively) (Perinatal Statistics, 1993).

First Year of Life

Infant mortality

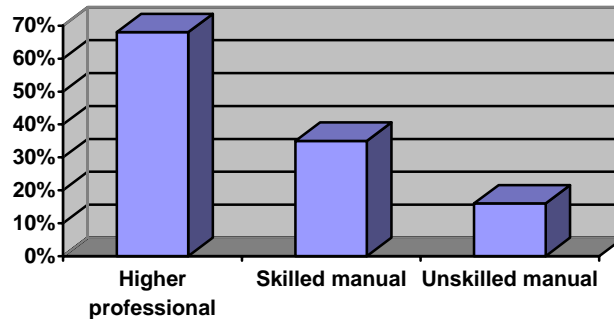
It is not possible to examine infant mortality by socio-economic grouping at a national level at present. However, in the Southern Health Board (SHB) area, Ryan and colleagues compared the infant mortality in Cork city with the rest of the SHB and found rates of 10.5/1,000 and 7.5/1,000 respectively. They used Cork city as a proxy deprived area on the basis that almost half of all the most deprived district electoral divisions, as per the SAHRU deprivation index, in the SHB area were in Cork city (Ryan et al, 2000).

Breastfeeding

Breastfeeding is known to provide a wide range of health benefits. These benefits persist during infancy, throughout childhood and possibly even into late adult life (Food Safety Authority of Ireland, 1999). Breast-feeding confers protection against gastrointestinal and respiratory infections (FSAI, 1999). It has been found to reduce the duration of secretory otitis media and if prolonged to act as prophylaxis against recurrent middle-ear infection. The Department of Health and Children promotes breastfeeding as the infant feeding method of choice (National Breastfeeding Policy for Ireland, 1994).

Limited information is available about breastfeeding practices in Ireland. The most recently published perinatal statistics show that, in 1993, 34% of mothers were breastfeeding on discharge from hospital (Dept of Health 1993). In a study carried out in 22 European centres from 1992 to 1996, the lowest level of breastfeeding was recorded in Ireland (Freeman, 1996). Rates of breastfeeding in Ireland show a strong socio-economic gradient. As shown in figure 10, 68% of mothers in higher professional groups (by father's occupation) breastfeed, compare with 35% in the skilled manual group, and 16% in the unskilled manual group (Dept of Health 1993). Breastfeeding rates are lower than average in young mothers (11% in those aged under 20, compared with 21% in those aged between 20 and 24).

Figure 10: Percentage of Mothers Breastfeeding in Higher Professional, Skilled Manual and Unskilled Manual Groups (by father's occupation), 1993.



No infrastructure has been put in place to meet the national breastfeeding targets of 50% initiation (30% in lower socio-economic groups) and 30% maintenance at four months by the year 2000. Data have not been published since 1993. The policy as enunciated in 1994 was good on paper. The recommendations were that breastfeeding be promoted in maternity hospitals and units, at community care level and in the wider community. Health boards and maternity hospitals and units were to have written policies and each health board community care area was required to identify a public health nurse as a resource person with expertise in breastfeeding. In addition, workplace creche facilities and lactation breaks were to be promoted.

This policy is an example of a lack of commitment to follow-through and implementation.

Sudden Infant Death Syndrome

Sudden Infant Death Syndrome (also called SIDS or cot death) is the leading cause of death of infants aged 1 month to 1 year. It is defined as the death of an infant or young child which is unexpected by history and in which a thorough post mortem examination fails to demonstrate an adequate cause of death.

The exact cause of SIDS is unknown. However, a variety of epidemiological factors have been linked with it and research studies worldwide have consistently highlighted two risk factors, namely sleeping in the prone position (face down), and smoking (maternal, paternal and passive) (Irish Sudden Infant Death Association, 1999).

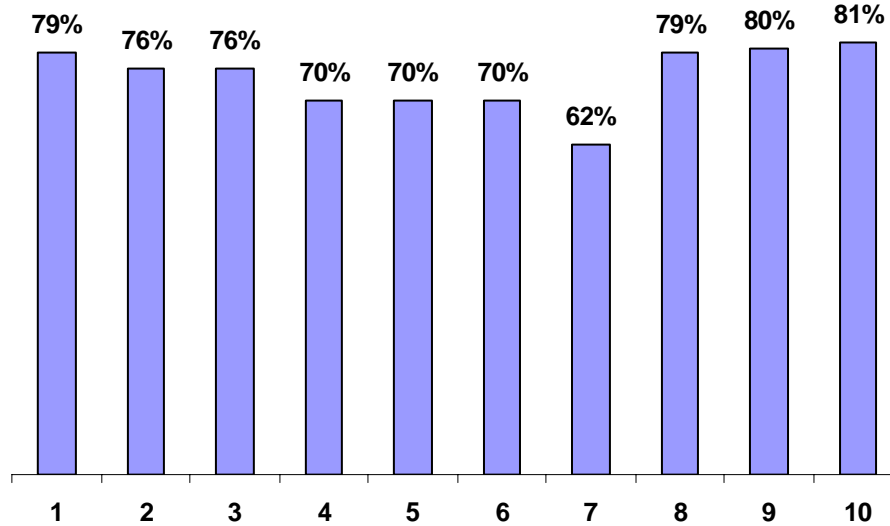
Since 1992, the Irish Sudden Infant Death Register has recorded SIDS deaths occurring in the Republic of Ireland, with a view to establishing the incidence of the condition in Ireland. It also aims to look at epidemiological factors that may be of importance in the causation of the condition (ISIDA, 1998). Its report for 1998 shows that 37% of deaths in babies aged four weeks to one year were due to SIDS. Seventy seven per cent of cases occurred in social classes 4 to 6 (national population: 55% in social classes 4-6); 25% of fathers were unemployed (national unemployment figure of 6.4%) and 56% of parents were medical card holders (national figure: 32% medical card holders). However, it is important to point out that these figures refer to a comparatively small number of cases (40 deaths). For seven consecutive years (1992 – 1998) parental smoking and unemployment were evident in greater proportions among SIDS families than national average figures (ISIDA, 1998).

Vaccination Uptake

Immunisation uptake rates in Ireland vary from one health board to another and also vary by vaccine. All uptake rates, however, continue to fall short of the 95% uptake target set. The uptake rates nationally for primary immunisations (diphtheria, pertussis, tetanus, polio, haemophilus influenzae b) are 76-77% by age 12 months, rising to 83-87% by the age of 24 months (Fitzgerald and O'Flanagan, 2001).

There are good data from the Eastern Regional Health Authority (formerly the Eastern Health Board) on vaccine uptake. This health authority provides health services for the 1.3 million people in Dublin, Kildare and Wicklow. The authority is divided into 10 different community care areas (community care areas 1 to 10). The uptake of primary vaccinations at 12 months of age within each community care area is detailed in Figure 6.

Figure 6: Average quarterly percentage uptake of primary childhood vaccinations at 12 months of age by community care area, EHB, 1996



Source: Public Health in the Eastern Health Board Region, 1998

This illustrates that community care areas 4,5,6 and 7 have the lowest uptake rate of vaccination. These four community care areas are the most deprived in the Eastern Region, having a deprivation score of >30%, compared to a deprivation score of 10-30% for areas 2,3 and 8, and a deprivation score of <10% for areas 1,9 and 10 (Eastern Health Board, 1998). This deprivation score index was developed by the Small Area Health Research Unit (SAHRU) in Trinity College, Dublin.

In a study of childhood immunisation uptake in a deprived inner city area of Dublin, Clarke (1992) found that uptake rates were significantly higher in those of higher social class (82.1% versus 50.5% in lower social classes), non-GMS (general medical services) card holders (67.3% versus 50.7%), and higher educational level of the mother (85.1% versus 51.2%). First time mothers were more likely to have their child vaccinated than those with more than one child (73.1% versus 46.8%). This may be related to accessibility and the difficulty of taking more than one child to a clinic. Quinlan (1988), in a study of measles immunisation uptake, also found that high parity (number of children) and lower socio-economic status were associated with lower immunisation uptake.

Clarke (1992) found that there was no difference in uptake rates between children of married and non-married mothers. However, immunisation rates were significantly higher in children of mothers who were involved in the Community Mothers' Programme (84.2% versus 52.7%) (the Community Mothers' Programme is explained in more detail later in this chapter). This finding was supported by that of a randomised controlled trial of the Community Mothers' Programme in Dublin (Johnson et al, 1993) where children in the intervention group were more likely to have received all of their primary immunisation. Clarke recommended that parents with more than one child and of lower socio-economic status should receive special attention and encouragement by health professionals, and that the Community Mothers' Programme, currently available only to first time mothers, should be expanded to include mothers of more than one child.

As stated in *Shaping a Healthier Future*, a minimum uptake rate of 95% should be achieved and maintained for the childhood immunisation programme in all community care areas. A commitment was given to improving the notification and call/recall systems for immunisation, targeting parents in areas where the uptake of immunisation is low, involving GPs to a greater extent in the immunisation programme.

The current targets for immunisation are not being met. This is primarily because targets are set but responsibility for reaching targets has not been assigned. Policy to date has centred on methods of payment for vaccination programmes, with little focus on the targets per se. A new national immunisation steering committee has been set up by the health board Chief Executive Officers (CEOs) with the overall objective of maximising immunisation uptake. If this initiative addresses the need for clearly delineated lines of responsibility for uptake rates, it should result in higher rates being obtained.

Later Childhood

Infectious Diseases

Whilst infectious diseases are no longer a major source of mortality in Irish children, they still cause major morbidity. Their importance also lies in the fact that many of them are preventable either by vaccination, by improving hygiene or social conditions, and by education. The childhood diseases which are vaccine-preventable include measles, whooping cough, some forms of meningitis and mumps. Vaccines against all of these diseases are included in the national childhood vaccination schedule offered to all children. Despite this, in 1997, notification was received of 185 cases of measles, 459 of whooping cough, 506 of bacterial meningitis (not all vaccine-preventable), and 285 of mumps (Department of Health and Children, Health Statistics 1999). These figures are not surprising given that the uptake rates for all of these vaccines are considerably lower than the target rate of 95% (Report of the Chief Medical Officer, 1999).

An outbreak of measles began in the Eastern Regional Health Authority Region in early 2000, with over 1,200 cases notified in the first six months of the year. Over 100 children were hospitalised and there were two measles-related deaths. Measles is a highly infectious viral disease that is associated with serious complications in 1 in 15 cases. Deaths and serious complications occur particularly in young children.

Measles vaccine is safe and effective. It was introduced to the childhood immunisation schedule in Ireland in 1985 and is currently administered as part of the MMR (measles, mumps, rubella) vaccine. Adequate vaccine uptake rates have never been achieved in Ireland. A minimum vaccine coverage of 95% is required to eliminate measles in a population. The current uptake rate nationally is approximately 81%, but varies considerably from one health board to another, and within health boards (Fitzgerald and O'Flanagan, 2001).

The structure for surveillance and control of infectious diseases has improved since the setting up of health board Departments of Public Health in 1995, the Food Safety Authority of Ireland in 1997 and the National Disease Surveillance Centre in 1998. But further investment in information technology and personnel would strengthen this structure and lessen the risk of future threats from infectious diseases.

Childhood Accidents

Childhood accidents and resulting injuries are a major public health challenge. In most European countries, Ireland included, mortality in the 0 to 14 year age group for all causes has declined since the beginning of the century. However, much of this decline results from the more effective control of infectious and nutritional diseases (Health Statistics, 1999). Death rates from accidents remain high. Accidents are now the leading cause of death in children over one year of age in Ireland. Accidents in the home are the main cause of death and morbidity in early childhood (Clover, Hutchinson and Judson, 1982).

The UK Black Report (Working Party on Inequalities in Health, 1980) found that childhood accidents have a steeper social gradient than any other fatal condition. Although the death rate from accidents is falling, the social gradient has become even more marked. Black found that almost all the differences in mortality between higher and lower incomes in children aged 1-4 years were due to accidents and respiratory illnesses.

A study conducted on the attendees of the Accident and Emergency Department of a children's hospital in Dublin confirmed a social class gradient in childhood accidents in Ireland as well (Laffoy, 1991). The study compared 169 patients attending because of home accidents with 169 patients attending for other reasons. A disproportionately large number of home accident attendees were found to be from social classes 4-6. These results are illustrated in Figure 14.

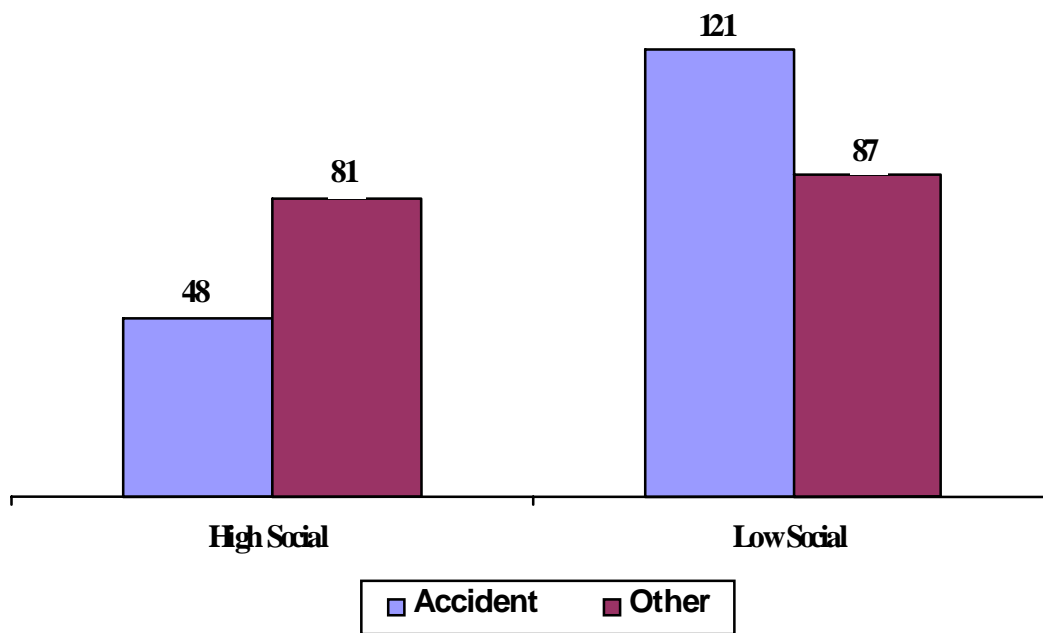


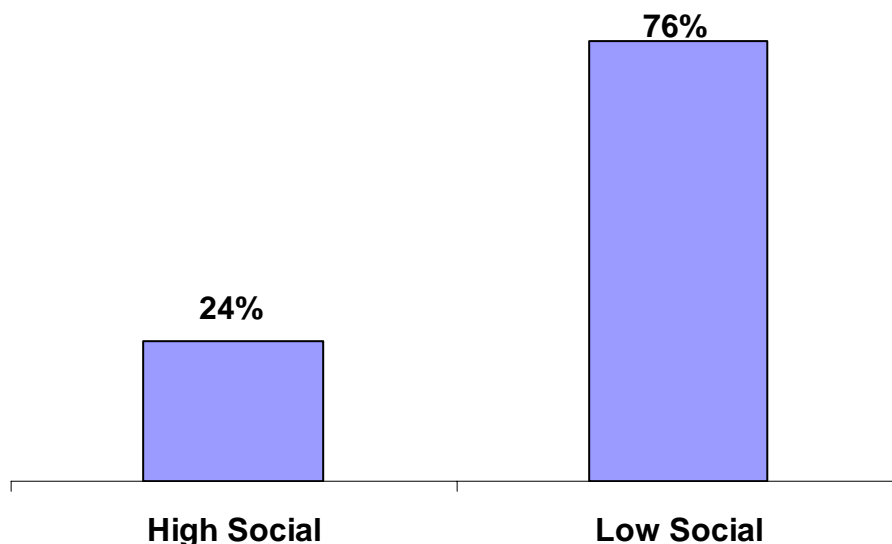
Figure 14: Comparison of Attendance at A&E Due to Home Accidents and Other Causes, by Social Classes

Road Traffic Accidents in Children

It has already been stated that accidents are the leading cause of deaths in children over one year of age (Health Statistics, 1999). Between one-third and one-half of these deaths are due to road traffic accidents (Corcoran, 1986). Mortality represents only the tip of the iceberg as far as children's accidents are concerned. A review of United Kingdom data found that for every child killed in a road traffic accident, 18 are seriously hurt and 66 are slightly injured (Jackson, 1978).

A study carried out in Temple Street Children's Hospital looked at road traffic accidents in 115 children aged 0-14 (Corcoran, 1986). This study found that the rate of road traffic accidents in children from lower social class families (social class 4-6) is considerably higher than from higher social class families (social class 1-3). More than three-quarters of child road traffic accident victims were from lower social class groups. These results are illustrated in Figure 15 below.

Figure 15: Social class of children seen in Temple Street Hospital due to road traffic accidents (high=social class 1-3, low=social class 4-6)



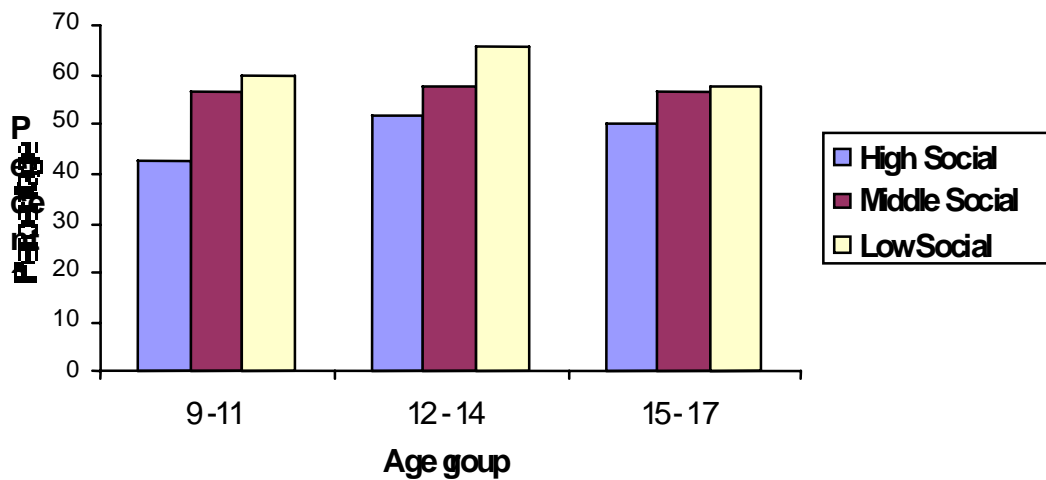
The researcher also looked at the employment status of fathers of the road traffic accident victims. In 38% of childhood road traffic accident cases, the father was not working. This compared with an unemployment level of 18% at the time of the study in the catchment area served by the hospital. Thus, children involved in road traffic accidents are more likely to have an unemployed father compared to the general population.

Diet in Children and Teenagers

A national study of the Health Behaviours of School Children (HBSC) was conducted by the Department of Health Promotion, University College Galway, between November 1998 and January 1999. The overall aim of the study was to guide the further development of health promotion services for schoolchildren, and to target the services at specific age groups and social classes.

The study found that children from lower social classes (social class 5/6) were more likely to consume food with high fat and high sugar content. The results of the study for children aged 9-11, 12-14 and 15-17, by high, middle and low social classes are shown in Figure 16.

Figure 16: Percentage of children consuming high fat and high sugar foods frequently by age



This is important, as dietary patterns established during these years may persist for life. A poor diet is linked with a large number of different diseases in adult life, either directly or through the weight gain associated with high fat and high sugar diets. These illnesses include coronary heart disease, diabetes, colorectal cancer and high blood pressure.

Alcohol use

In the national Slan survey it was found that for girls aged 15 to 17 years, 44% in the highest social classes reported having been “really drunk” compared to 52% in the lowest social classes, and for girls aged 12 to 14 years the respective figures were 12% and 28%. For boys there was no social class gradient in the younger age group and for the older age group the social class gradient was 53% for the highest social classes and 59% for the lowest social classes (Friel, Nic Gabhainn and Kelleher, 1999).

Teenage Births

In 1999, 6.2% of births in Ireland were to teenage mothers (Central Statistics Office, 1999). Levels of teenage births are higher in the lower socio-economic groups (Hynes and Acton, 1998). Teenage pregnancy presents many adverse effects for mothers and babies. A high proportion of these young mothers come from deprived urban areas (Department of Health, 1995).

The Eastern Health Board established the Teenage Health Initiative as a primary preventative programme which aimed to target teenagers at risk of pregnancy. The objectives were to educate young people in positive knowledge and to bring about changes in attitude and behaviour in relation to their personal development and sexual activity. The evaluation of the pilot programme showed that there was a significant increase in knowledge at the end of the programme as well as some changes in attitude towards sexual activity and relationships. Similar such programmes and initiatives should be considered in other areas and in organisations dealing with young people. As stated in the discussion document, *Developing a Policy for Women’s Health*, priority needs to be given to deprived urban areas in the development of such programmes (Department of Health, 1995).

Traveller Children

The Travelling community in Ireland experiences a high degree of social exclusion and disadvantage. Children of Travellers are particularly deprived because of less access to preventive health and education because of their nomadic lifestyle. Acute health problems, e.g. chest infections, bronchitis and gastrointestinal problems, are common due to overcrowding, residing on the roadside and on temporary sites, many of which are without toilets, electricity and washing facilities (South Eastern Health Board, 1998).

A national population based study of Travellers found that the rate of congenital anomalies in the national Traveller population was 5.5%, compared with 2.9% in the general population of the Eastern Health Board, which was the comparison population used (Barry J, Kirke P, 1996). Almost all of this excess of congenital abnormalities was due to metabolic conditions.

Physical disability is higher not only because of congenital abnormalities but also because of accidents. Learning disability is also higher than in the general population. Inadequate antenatal care in some Traveller women and the low proportion of Traveller women who initiate breast-feeding contributes to the lower health status, but the majority of illnesses in children are due to the environment in which they live (South Eastern Health Board, 1998).

A study conducted in the South Eastern Health Board on the health status of Travellers in 1998/9 looked at 370 Traveller families and 1216 children. The researchers found that 47% lived on official serviced sites, 41% were living in a field or on the roadside, and 12% lived on temporary sites such as the backyards of houses or on farms.

With regard to washing facilities for adults and children, 53% had their own hot and cold water supply, 9% had a cold water supply only, 8% shared hot and cold water with other households, and 30% had no water supply. The provision of hot and cold water would be considered as one of the basic requirements for the maintenance of good health.

Taking the General Medical Services (GMS) card as an indicator of economic deprivation, over 93% of Traveller families have medical cards, compared to 38% of the general population of the South-East.

Regarding health status, over 10% had one or more members of the family with a long term physical disability, and 6% had one or more family members with an intellectual disability. The rate of intellectual disability in the general population of the South-East is 0.75%, based on utilisation of services rather than on true incidence.

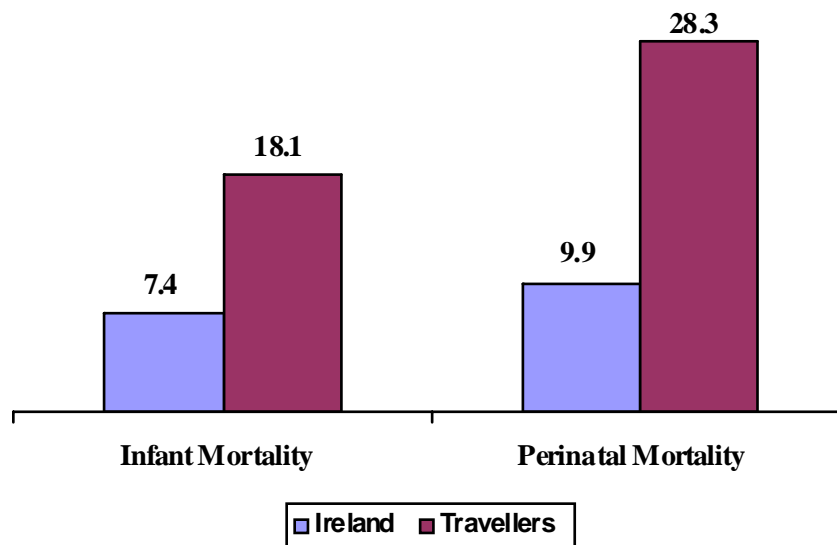
The study also looked at upper respiratory tract infections in Traveller children. Over 90% of children had respiratory infections more than once in the previous year, 76% had recurring sore throats, 86% had ear infections and 95% had colds and runny noses, the majority on an ongoing basis.

The survey showed that 44% of Traveller children had been fully immunised by the age of 12 months, compared to 86% of the settled community. Almost 77% of Traveller children had received their developmental check by the age of five, compared to 93% of children in the settled community.

Only 13% of Traveller women had initiated breast-feeding and over 75% of these had stopped after the first month. One of the main reasons cited for not breast feeding was a lack of privacy due to overcrowding.

Recording the mortality rate among Traveller children is difficult, as there is no mechanism for routinely recording the social background of children on statutory notification forms. A 1987 study by the Health Research Board compared the mortality rate of Traveller children with that of the general population (Barry, Herity and Solan, 1987). They found that the total fertility rate for Traveller women was 5.3, compared to 2.3 for the general population. The infant mortality rate for Traveller children was 18.1 /1,000 live births, compared to 7.4 for the general population. The perinatal mortality rate for Traveller children was 28.3 /1,000 live and stillbirths, compared to 9.9 for the general population. These results are illustrated in Figure 17.

Figure 17: Infant Mortality and Perinatal Mortality per 1,000 Births for General Population and Travellers



A study conducted in 1998 looked at the problems that Traveller women experienced in accessing healthcare services for themselves and their children (Heron, 1999). The researchers found that Traveller women experienced delays in getting hospital appointments, poor understanding of Travellers' needs by health professionals, doctors declining to do home visits and not being treated with respect in health clinics.

A detailed national study of maternal and infant health in Irish Travellers found that the percentage of teenage births in the Irish Traveller population was 11.2%, compared to a rate of 2.7% in the nearest comparable group in the general population, the unskilled manual group (Barry 1996). A comparison of parity in the Traveller population compared to the unskilled manual group found that 21.5% of Travellers had six or more children, compared to 5.6% of the unskilled manual group. A tenfold difference in the proportion of mothers receiving no antenatal care was noted between Traveller mothers and mothers from the unskilled manual group. Thus, Traveller women are more likely to be teenage mothers, more likely to have large families and less likely to receive antenatal care than even the most disadvantaged women in the

general population. These maternal health factors are likely to adversely impact on the health of their children.

In summary, Traveller children have been shown to have considerably less favourable health status than the settled community. The rate of physical and intellectual disability is much higher than in the general population. They are less likely to have been breastfed, to receive primary immunisations and to have had a developmental examination. They have a high rate of upper respiratory tract infections. Their infant and perinatal mortality rates are considerably higher than the settled community.

The Travelling Community is the only economically disadvantaged sub-group of the Irish population on whom data are systematically collected. It is the only sub-group for which programmed health-care is planned, through dedicated units (Traveller Health Units) in each health board. These were only set up after evidence had been gathered which showed Traveller children at extreme disadvantage and following a National Task Force being set up. Information systems to routinely monitor the health status of Travellers have to be set up and it will be some years before the effectiveness of the Traveller Health Units can be evaluated.

Best Health for Children

To address the health needs of children from low income families will require a policy framework and commitment similar to that for Traveller children.

In 1996, a review of the child health screening and surveillance services was commissioned by the health board CEOs. The findings of the initial report of this initiative, “Best Health for Children”, were that the current surveillance system was not equitable and did not cater for differing levels of need. Insufficient recognition was given to the effectiveness of parents in detecting problems with their children and it was recommended that parents from vulnerable families receive more intensive support. The lack of free access to general practitioner services for all children under the age of 5 years was considered to be leading to delays in accessing care.

The Chief Executive Officers recognised the need for support for the change process outlined in “Best Health for Children” and set up a National Conjoint Child Health Committee. This multidisciplinary committee was established to oversee the implementation of the report’s recommendations and further research and initiatives in the area of child health. Two National Child Health Co-ordinators have been appointed to facilitate the further development and implementation of work on child health in Ireland.

“Best Health for Children” represents the first phase of a longer term project to develop work relating to children’s health in Ireland. Several sub-committees of the National Committee have been set up and are actively working on a number of areas of child health. In particular, a set of indicators is being developed so that the health of children and the effectiveness of the child health services can be measured. These indicators, if they enable low income families to be identified, will help to make the health deficits of low income families more explicit. The initiative is also promoting the use of parent held child health records. Information from their use in the United Kingdom is that all parents, irrespective of income, are good at retaining these records. The use of parent held child health records is being piloted in the Midwestern Health Board. The evaluation of this pilot will determine the extent to which this approach is incorporated at national level.

Community Mothers’ Programme

The Community Mothers’ Programme, launched in Ireland in 1983, has demonstrated that non-professionals can deliver acceptable and effective parenting programmes. It uses experienced volunteer mothers in disadvantaged areas to give support and encouragement to first time parents in rearing their children. Community mothers are trained and work under the guidance of a family development nurse. A randomised controlled trial found positive outcomes from the programme (Johnson et al, 1993). Children in the intervention group were more likely to have received all of their primary immunisations, to be read to, played more cognitive games, and were exposed to more nursery rhymes. The diet of the children and their mothers was more appropriate than that of controls.

This initiative has been shown to work, and thus resources should be put in place to expand it wherever it is felt it can be of benefit.

Summary

Despite the limitations of Irish data, there is evidence that children from low-income families have poorer health status, lower uptake of preventive health services and higher rates of health-damaging behaviour. In many situations, there is no policy in place to address these inequalities. Where policies are written, there is often no commitment, resources or framework in place to measure the impact of these policies. An overhaul of health data and information systems is required to address these deficiencies. The National Health Information Strategy which is currently being drawn up should take account of these deficiencies so that from now on it should become easier to describe the gaps in health status and health-care uptake between children from low-income families and other children. In some cases, this can be achieved through re-organising existing health data systems, but centrally funded occasional one-off studies, and rolling surveys to allow for determination of trends, will also be required.

The government has commissioned a design brief for a major national birth cohort study in Ireland and the opportunity should be taken to ensure that this study contributes in a major way to our knowledge of the health status of children from low income families.

The forthcoming National Health Strategy can contribute to a lessening of inequalities in child health by ensuring a robust set of policies is drawn up and that a commitment to implementation is made.

7. Upstream - general recommendations for future policy

The policy response

The socio-economic model of health and its inequalities suggests that policies should be both *upstream* and *downstream* (Acheson, op. cit.).

Upstream policies are those that deal with the wider influences on health inequalities.

For example, income distribution policy, housing policy, education policy, employment policy etc.

Downstream policies have a narrower range of benefits, such as health promotion policy and policies that promote healthy lifestyles.

The above analysis clearly identifies the relationship between poverty, inequality and poor health status. Taking account of this the recommendations from this analysis will include both **upstream** - economic and social policy recommendations and **downstream** – specific health policy recommendations.

Upstream – economic and social recommendations.

- To eliminate child poverty over the life-time of the current social partnership agreement.
- To provide increased income for low-income families with children. This could be done by increasing the children's allowance scheme, and by using the PRSI system to target these families.

- To introduce legislation / constitutional amendment to provide access to health care to all Irish citizens, especially children.
- To provide the Medical Card on a phased basis to all children, initially targeting those children under five and extending it over time to all children under 18 years of age.
- To provide additional funding to reduce the hospital waiting lists for children.
- To introduce a common waiting list for hospital admissions for children, eliminating the two-tiered system that exists at the moment.
- To set up a review of income maintenance / labour market schemes with a view to eliminating the labour market disincentives to the take up of employment opportunities among poor families with children.
- To provide funding for a national study of the quality of life of children in Ireland. This study should follow a cohort of children from birth to eighteen years of age.
- To urgently target the housing needs of poor families and of children who are homeless.

8. Downstream - health service recommendations: Shaping A Healthier Future

The single most important health policy document to emerge in the last ten years is the 1994 health strategy document (Shaping A Healthier Future, 1994). In some policy areas, very specific targets are set, whilst in other policy areas, more general recommendations are made.

The document identifies perceived weaknesses with the current system. These include-

- Many of the services are not sufficiently focused towards specific goals or targets
- Insufficient attention has been focused on tackling the main causes of premature mortality which results in a higher mortality rate than in other European countries
- Waiting times for some services are too long
- There are inadequate links between hospitals, general practitioners and other community services
- Community based services are not yet as well developed as they could be
- The organisational and management structures that are in place for over a quarter of a century need to be updated to provide for more effective decision making and accountability.

The document outlined three separate dimensions of the current health services that need to be improved upon and re-orientated to achieve health and social gain. These are-

- *The Services* – The current services need to focus on improving health status and quality of life, by increasing the emphasis on the provision of the most appropriate care
- *The Framework* – The management and organisational structures need to provide for more decision-making and accountability at regional level, allied to better methods of performance measurement
- *The Participants* – There needs to be more sensitivity to the right of the consumer to a service that responds to his or her needs in an equitable and quality-driven manner.

The 1994 health strategy is also underlined by a number of key principles, which include-

- *Equity* – Access to healthcare should be determined by actual need for services rather than ability to pay or by geographical location. Furthermore, services should be available within a reasonable length of time and special attention should be given to disadvantaged groups
- *Quality of Service* – The technical quality of the service should be such that the best possible outcome should be achieved. It is also important that the consumer feels that they are receiving a quality service, not simply in terms of the quality of clinical care, but also in terms of factors such as the courtesy of staff and the physical surroundings in which healthcare is delivered.
- *Accountability* – Those providing the service such not simply be accountable in a financial sense, but also be accountable in terms of achieving set objectives and also be accountable to consumers of the service.

The health strategy also laid out a four year action plan for implementation in the period 1994 to 1997. The action plan described a series of objectives for the health services across a wide number of different areas. The areas that are relevant to child health will be discussed in turn.

- **Health Promotion**

Health promotion programmes were to be developed in schools and other settings. Suitable materials for inclusion in social and health education programmes in schools were to be developed in liaison with the Department of Education. Priority areas for action that are particularly relevant to children included smoking, alcohol, nutrition and diet, and causes of accidents.

- **Dental Services**

The health strategy document gave a commitment that the deficiencies in the public dental service would be tackled over the next four years in the context of an

integrated dental development plan. This plan was to involve, over the 4 year period, the following developments in relation to children:

- Increased efficiency of, extension of and upgrading of water fluoridation schemes, and wider use of fluorides in general
- Oral health education programmes aimed at the family and other groups
- The phased extension of eligibility for public dental services to children under 16 years (until then, eligibility for children had been confined to those in pre-school and primary school age-groups)
- The phased improvement of primary and secondary orthodontic care for children
- Improvements in the school dental service
- The establishment of a standardised database in each health board for monitoring changes in dental health.

The strategy laid down the following targets for oral health by the year 2000:

- At least 85% of five-year olds in optimally fluoridated areas and 60% of five-year olds in less than optimally fluoridated areas should be free of dental caries in their baby teeth
- Twelve year old children should on average have no more than one decayed, missing or filled permanent teeth in optimally fluoridated areas and on average have no more than two decayed, missing or filled permanent teeth in less than optimally fluoridated areas.

- **Children's Health**

The document stated that there would be a detailed review of the pre-school and school health services during 1994. Such a review was carried out and is described below (Best Health for Children).

The strategy also made specific proposals in regard to infant care, immunisation programmes, and breastfeeding. These were based on the recommendations of the Review Group on Maternity and Infant Care and the Review Group on Immunisations.

Infant Care: - Every baby should have a visit from a public health nurse as soon as possible after discharge from the maternity hospital / unit, ideally within 24 hours. Every baby should have two designated visits to a general practitioner, one at two weeks and the other at six weeks after birth. Liaison arrangements between the GP and public health nurse were to be strengthened.

Health Centres: More health centres would be provided and existing centres would be improved where necessary.

Breastfeeding : - By the year 2000, there should be a breastfeeding initiation rate of 50% and a breastfeeding maintenance rate of 30% at four months.

- **Child Care and Family Support Services**

The strategy document stated that support services for children at risk and families in difficulty would be strengthened in co-operation with relevant voluntary bodies in accordance with the principles enshrined in the Child Care Act 1991. A major programme of investment in the child care services would ensure that all sections of the Child Care Act would be implemented by the end of 1996.

Planned developments included better support services for vulnerable families, improved links between the health boards, the Gardai and schools in relation to the prevention and investigation of child abuse, extra hostel places for homeless youths, new counselling and treatment services for children who had suffered abuse, improved availability of refuge, increased support for foster parents, and development of services to cater for disturbed and damaged children and adolescents.

- **Travellers' health**

The document acknowledged the various factors that militated against real improvements in the health of travellers, stating that the life expectancy and general health status among the travelling community are considerably lower than the population average. A commitment was given to the development of a health education programme aimed specifically at travellers, special arrangements to encourage and permit travellers to avail of primary care services, including child immunisations, and ensuring better continuity of care from one health board area to another.

- **Drug misuse**

The Department of Health would provide for the development of appropriate services, including primary prevention programmes in schools.

- **Acute hospital services**

The Department of Health made a commitment to put in place arrangements for the elimination of waiting times of over 6 months for children specialist ENT and ophthalmology procedures.

- **People with Mental Handicap**

The strategy included the establishment of a national database on the needs of people with mental handicap. It also stated that there would be further expansion of residential and day places, increased provision of home support services and respite care services for persons with mental handicap and their families, the implementation of the Department's policy document on services for people with autism, and the provision of genetic counselling services.

- **People with physical/sensory handicap**

The emphasis of future developments would be on providing extra facilities on the basis of locally assessed need. Information on needs would be facilitated by the establishment of a national database on physical handicap. It also highlighted the need for extra day care, respite care, home care, residential care and personal support services for patients and their families. A commitment was given that steps would be taken to reduce the incidence of neural tube defects by increasing awareness among women of childbearing age of the need to have adequate folic acid in their diet.

- **Youth As A Resource**

This 1999 Department of Health and Children report aims to promote the health of young people who are at risk (Youth as a Resource, 1999). The report defines young people at risk as being those who have been involved in criminal behaviour, been in care, have a history of substance abuse, prostitution or family problems and abuse. The report outlines the recommendations of the National Consultative Committee on Health Promotion under a number of separate categories: youth participation and access, integration of services, parenting and family support, education, good practice and funding, and health promotion. Specific recommendations of relevance here include the following:

- That young people have access to comprehensive, anonymous and accessible sexual health services
- That co-ordination of services for children and families at risk be led at a government department level
- That community based prevention and support services be developed nationally for parents and families and that they be specifically targeted towards families at risk
- That greater priority be placed on addressing the issue of poverty within health promotion work with a particular focus on young people at risk. It calls for an exploration of the role of the media in relation to the extent of its influence and responsibilities with regard to young people's health.

- **A National Breastfeeding Policy for Ireland**

A committee was set up by the Minister for health in 1992 to develop a national policy to promote breastfeeding. It reported in 1994 - A National Breastfeeding Policy for Ireland. This report made recommendations regarding the following:

- Promoting breastfeeding in maternity hospitals and units. Each such unit should have a clear written policy.
- Promoting breastfeeding at community care level including the role of voluntary support groups. It recommended that each health board should have a written breastfeeding policy. Each community care area should identify a PHN as a resource person with expertise in breastfeeding. A breastfeeding clinic should be held weekly in each health centre. Data on prevalence of breastfeeding at discharge and at 4 months should be collected by each community care area.
- Training of health professionals
- Promoting breastfeeding in the wider community, including the provision of workplace creche facilities and lactation breaks.
- Targets, implementation and monitoring. It set a target of an overall breastfeeding initiation rate of 35% by 1996 and 50% by 2000; and a breastfeeding initiation rate of 20% among lower socio-economic groups by 1996 and 30% by 2000. (It should be noted that the information systems currently in place nationally are inadequate to measure the targets set out in the policy).

- **National Health Promotion Strategy**

The year 2000 health promotion strategy (National Health Promotion Strategy, 2000) sought to set out a broad policy framework within which health promotion aims and objectives could be achieved. The strategy calls for all government policies to be health proofed, for the health services to be reorientated towards health promotion and for regional health promotion structures to be strengthened.

The strategy calls for health education and health promotional efforts to be targeted at children from lower socio-economic groups, particularly in regard to smoking and nutrition. It highlights the need to improve on the low level of physical activity in young people and also the need to reduce the level of male suicide.

- **Developing a Policy for Women's Health**

The 1994 discussion document on women's health (Developing a Policy for Women's Health, 1994) covers a wide number of women's health issues, some of which impact on child health. The year 2000 breastfeeding targets are again emphasised. The rising number of teenage pregnancies is highlighted, and the document calls for priority to be given to deprived urban areas in educating young people about responsible attitudes to sexual relationships. The document calls for health boards to identify "health development sectors" in each region on the basis of indicators of health status and social problems, and for particular attention to be given to teenage pregnancies.

- **Children First**

These national guidelines for the protection of children encompass child physical and sexual abuse, as well as child neglect and child emotional abuse. They provide a framework for the identification, investigation and management of child abuse by health boards, the garda síochána and other statutory bodies. They are based on the provisions of the 1991 Child Care Act.

The guidelines lay down very specific parameters by which health boards must formally notify the garda síochána of suspected child abuse. They also detail the need for the establishment of liaison management teams between health board social work teams and the garda síochána.

- **Best Health for Children**

The report “Best Health for Children. Developing a Partnership with Families” was completed in 1998. It resulted from a review, carried out at the request of the Health Board Chief Executive Officers, of the child health screening and surveillance services for pre-school and school age children in Ireland.

The conclusions of the review were as follows:

Quality of Child Health Surveillance Service

- Children with emotional and psychological problems have hitherto received insufficient attention in surveillance programmes
- There is an unacceptable level of variation in quality in child health surveillance systems
- Some parts of the current child health surveillance system are not evidence based, and need to be changed or stopped
- Health promotion in schools is currently inadequate in most regions
- Treatment services for children with behavioural problems are insufficiently developed in most areas
- Teachers and parents currently have unacceptable difficulties in getting support from educational psychology services

Partnerships with Parents

- Insufficient recognition is given to the effectiveness of parents in detecting problems with their children
- The facilities for child health screening are often inadequate and little emphasis is placed on making sure the facilities are child and family friendly
- Parents from vulnerable families should receive more intensive support than they currently receive

Equity

- The current surveillance system is not equitable or flexible, and does not cater for different levels of need
- The lack of free access to general practitioner services for all children under five can lead to a delay in certain problems receiving attention
- The health of traveller children is a cause for considerable concern. There is little commitment to a comprehensive programme of health improvement

Accountability

- The process of referral and feedback when a problem is detected with a child is very variable and too often unsatisfactory
- Children with complex needs require a seamless and co-ordinated service

The report proposed a new model for child health surveillance services whereby all service components would operate in a co-ordinated way to deliver services that are flexible and capable of responding to different or changing needs. Services should be evidence based in terms of effectiveness and outcomes and should be supported by a quality assurance system. The proposed new programme recognises that a partnership approach with parents is likely to be most effective in achieving health and social gain for children.

The key themes of the report are:

- Developing a child-centred health promotion approach
- Creating a partnership between professionals and parents
- Quality assurance systems and procedures that support screening
- Screening based on evidence
- Improved co-ordination for children with complex problems
- Improved management and increased accountability

The Chief Executive Officers recognised the need for support for the change process outlined in this report and have set up a National Conjoint Child Health Committee, as recommended in the report. This multidisciplinary committee was established to oversee the implementation of the report's recommendations. Two National Child Health Co-ordinators have been appointed to facilitate the further development and implementation of work on child health in Ireland.

“Best Health” represents the first phase of a longer term project to develop work relating to children's health in Ireland. Several sub-committees of the National Committee have been set up and are actively working on the following areas:

Adolescent health

A review is being carried out of the health of adolescents. The areas being addressed by this group are: mental health, chronic physical illness, educational disadvantage, homelessness and minorities, health-related behaviours, and accidents and injuries.

Child health indicators

“Best Health for Children” identified the need to develop a set of indicators by which the health of children and the effectiveness of the child health services can be measured in Ireland. This sub-committee has been exploring current sources of child health data, child health indicators used in other countries, and the feasibility of developing a set of indicators for use in the Irish setting.

Parenting

The need for parent training programmes has been identified in “Best Health” and in other reviews and reports. This group aims to research parenting programmes currently in place, evidence in relation to effectiveness of parenting programmes, carry out needs assessment in relation to parenting programmes and make recommendations.

Training

This group has been set up to explore the training needs of health professionals involved in delivering the child health surveillance services. It will recommend a training programme to meet these needs.

Regional implementation and “demonstration projects”

A committee has now been established in each health board region to oversee the implementation of the recommendations of “Best Health”. In addition, each board has agreed to take on a “demonstration project” on one topic identified in the report – the

idea being that, once evaluated and refined, this action could then be replicated in a rational fashion throughout the other health boards. Examples of these projects are:

- The development of parent held child health records
- The development of a quality assurance system for aspects of the developmental child health examination

Parent held child health records (PCHRs)

The report “Best Health for Children” recommended that “serious consideration should be given to the development of a PCHR in Ireland which would be used for all children” and that “parent representatives should be involved at all stages of planning and evaluation”.

The idea of PCHRs is that the child’s health record would be held by the parents, who would present it to the health professional wherever the child is seen, e.g. in a child health clinic, doctor’s surgery, hospital. Parents would have access to the information about their child’s health. PCHRs support the concept of parents as partners in overseeing the health of their children. The fact that parents hold the record means that the record is immediately available if they move from one area to another. The records can also be used to carry useful health promotion and education material to reach all parents. Thus it would appear that PCHRs should play a part in improving equity and access of child health care.

The pilot project on PCHRs currently underway in the Midwestern Health Board is to be welcomed. A full evaluation of the project, addressing acceptability, costs, usefulness, confidentiality and data ownership issues, effectiveness as a health promotion tool, and training requirements, should be carried out before a decision is taken to implement PCHRs nationally.

Parent education

The report “Best Health for Children” (Denyer et al, 1999) recommended that a parent education programme be developed nationally and that it be based on the following principles:

- Accessible to all parents free of charge
- The role of fathers should be recognised and promoted
- High quality, assured by continuous monitoring
- Adequately funded
- Group-based in the community and peer-led

All parents can benefit from access to peer-led, participatory and enabling education. Parent training should be undertaken as a partnership between the health and education sectors, parents and voluntary groups. Work is now underway, under the National Conjoint Child Health Committee, to develop a national programme of parent education.

In general, studies indicate that parent training has good results with a wide range of child behaviour problems and remains an intervention of choice when skill deficits have been identified (BMA1999). A systematic review of the effectiveness of parent training programmes in improving behaviour problems in children aged 3-10 years, carried out by the Health Services Research Unit in Oxford (Barlow, 1997), found that:

- Group-based parent-training programmes have a positive impact on the behaviour of children between the ages of 3 and 10 years.
- Group-based parent-training programmes are more successful in improving the behaviour of children compared with methods that involve working with parents on an individual basis.
- Community-based group parent-training programmes produced more changes, were more cost-effective and more acceptable to parents than individual clinic-based programmes.
- There is still insufficient research to demonstrate which aspect of group parent-training programmes is the decisive factor in bringing about change.
- There is still insufficient research demonstrating which parents do and do not benefit from the different types of parent-training programmes available.

Community Mothers' Programme

The Community Mothers' Programme, launched in Ireland in 1983, has demonstrated that non-professionals can deliver acceptable and effective parenting programmes. It uses experienced volunteer mothers in disadvantaged areas to give support and encouragement to first time parents in rearing their children. Community mothers are trained and work under the guidance of a family development nurse. A randomised controlled trial found positive outcomes from the programme (Johnson et al, 1993). Children in the intervention group were more likely to have received all of their primary immunisations, to be read to, played more cognitive games, and were exposed to more nursery rhymes. The diet of the children and their mothers was more appropriate than that of controls.

9. Specific Recommendations

Immunisation

Each Health Board should appoint a childhood immunisation co-ordinator whose responsibility would be to ensure that national childhood immunisation targets are met in each Health Board by the year 2005.

The Department of Health and Children should state explicitly what are the targets for the National Childhood Immunisation Programme in respect of each vaccine.

For each Community Care Area which is 10% below the national target reached for uptake of childhood immunisation an additional deputy childhood Immunisation Co-Ordinator reporting to the Health Board child immunisation co-ordinator should be appointed.

Breastfeeding

An appropriate information system should be in place so that targets of the National Breastfeeding Policy can be measured. Efforts should be concentrated in areas where breastfeeding rates are 20% below national targets.

Accident Prevention

A safety inspection should be carried out on each local Authority playground.

Penalties for non-compliance with road safety regulations as applied to children should be increased.

A pilot trial of an injury surveillance system should be put in place through a) sentinel general practices b) selected number of hospital A&E departments.

Upstream

In light of the particular problems of lone parents in the workforce, further encouragement, including fiscal incentives, are given to employers who adopt family

policies (that is, crèches, flexitime, opportunities to work from home etc.) The government should consider introducing increased entitlement to maternity leave and the introduction of a right to paternity leave for all parents.

A good general education appears to help young women avoid early motherhood, taking up smoking, and smoking during pregnancy. We recommend that further steps are taken to improve educational opportunities and outcomes for children from low income families.

Smoking

Efforts need to be maintained to emphasise parents' responsibility for postnatal protection of their children from passive smoking , and to encourage them to quit free nicotine replacement therapy where appropriate.

Nutrition

The school curriculum should include nutrition and cooking skills with a special emphasis on providing healthy meals on a low income.

Low fat, high fibre food should be subsidised in schools.

Free milk should be made available to all primary school children.

Further Research

An audit should be carried out of the list of recommendations which applied to children to determine progress in relation to their implementations the 1994 document "Shaping a healthier future"

Research is needed that evaluates a wide range of child outcomes where income supplements have been offered to low income families.

Better evidence and dissemination of “what works” for children with emotional and behavioural problems , including the identification of the most effective interventions, and the age(s) at which these might be fruitful is required.

Further studies are required to identify effective interventions that establish “what works”in supporting parents to quit smoking in pregnancy and beyond.

Travellers

In each community care area public health nurses should be assigned responsibility for traveller health services.

Folic Acid

A programme aimed at highlighting the benefits of periconceptional folic acid should be targeted in areas with high proportions of single teenage mothers and in areas with high levels of deprivation.

Tobacco

The Office for Tobacco Control should be asked to establish programmes for gathering information on smoking in pregnancy and reducing the rates by 30% over the next 10 years.

Information Systems

Assign and record on a death certificate social class in respect of each death to children under 14.

A parent health child health record should be developed in Ireland and parent representatives should be involved at all stages in the planning.

As part of the developing national health information strategy a unique personal identifier number should be assigned at birth.

Information on ethnicity, (including traveler status) should be collected in a sensitive manner during all interactions between children and health services where such data collection is going to contribute to health information systems.

Occupational data on parents in work should be collected routinely on admission of a child to hospital.

We recommend that an annual report on the health of children, should be published by the Chief Medical Officer, Department of Health and children with a view to monitoring health trends in children so that remedial action can be taken where needed and progress monitored.

Services

Recommendations emanating from the best health for children document and its ensuring working parties should be developed and researched and a new model for child health survey and services whereby all service components would operate in a co-ordinated way to deliver services that are flexible and capable of responding to different or changing needs should be developed.

Services should be evidence based in terms of effectiveness and outcomes should be supported by a equality assurance system.

Health authorities and local authorities should collectively review their existing day care provision and develop, where necessary, collaborative programmes that act as a “one stop shop”. for children and their families to gain access to health, education, social services.

We recommend that the number of moves for children in public care should be kept to an absolute minimum, and that they are given a level of care and opportunities to compensate for their poor start in life.

We recommend that separate and suitably equipped facilities for the reception and treatment of children should be available in all accident and emergency departments. Doctors and nurses in this setting should receive training about basic child development; at the very least there should be a paediatric liaison doctor and nurse available.

Women from lower income groups should be targeted for ante-natal visiting so as to increase the uptake of early ante-natal care.

Parents

A partnership approach with parents should be developed as this is likely to be the most effective method of achieving health and social gain for children.

Parenting programmes which have shown to be effective in other countries should be replicated in Ireland.

A task force on early teenage births should be set up with a core aim of reducing the numbers and proportion of births to teenage mothers, in particular those aged under 16 years.

References

Acheson, Sir Donald (1999) *Independent Inquiry into Inequalities in Health Report*. Chairman Sir Donald Acheson.

Alison LH, Counsell AM, Geddis DC, Sanders DM. *First report from the Plunket National Child Health Study: smoking during pregnancy in New Zealand*. Paediatric and Perinatal Epidemiology 1993; 7: 318-33.

Alm B, Milerad J, Wennergren G, Skjaerven R, Oyen N, Norvenius G et al. *A case-control study of smoking and sudden infant death syndrome in the Scandinavian countries, 1992 to 1995*. Arch Dis Child 1998;78:329-34.

Anderson HR, Cook DG. *Passive smoking and sudden infant death syndrome: a review of the epidemiological evidence*. Thorax 1997;52:1003-9.

Barlow J. *Systematic review of the effectiveness of parent-training programmes in improving behaviour problems in children aged 3 – 10 years*. Health Services Research Unit, Department of Public Health, University of Oxford, 1997.

Barry J, Herity B, Solan J, 1987. *The Travellers' Health Status Study. Vital statistics of travelling people, 1987*. Dublin: Health Research Board, 1989.

Barry J, Kirke P, 1997. *Congenital abnormalities in the Irish traveller community*. Irish Medical Journal; 90 : 233 – 234.

Barry J. *Maternal and infant health of Irish travellers*. Unpublished MD Thesis. Trinity College, Dublin, 1996.

Black D, Morris J, Smith C, Townsend, C (1980) *Inequalities in health: report of a Research Working Group*. London: Department of Health and Social Security.

Black D. *Inequalities in health. The Black Report*. Eds Townsend P and Davidson N. Penguin, 1982.

Blair PS, Fleming PJ, Bensley D, et al. *Smoking and the sudden infant death syndrome: results from 1993-5 case-control study for confidential inquiry into stillbirths and deaths in infancy*. BMJ 1996;313:195-8.

British Medical Association. *Growing up in Britain. Ensuring a healthy future for our children. A study of 0-5 year olds*. BMA, London, 1999.

Brooke H, Gibson A, Tappin D, Brown H. *Case-control study of sudden infant death syndrome in Scotland, 1992-5*. BMJ 1997;314:1516-20.

Butler NR, Goldstein H. *Smoking in pregnancy and subsequent child development*. BMJ 1973; 4:573-5.

Central Statistics Office. *Vital Statistics. Fourth Quarter and Yearly Summary 1997*. Dublin: Stationery Office, 1997.

Central Statistics Office. *Vital Statistics. Fourth Quarter and Yearly Summary 1999*. Dublin: Stationery Office, 1999.

Clarke A. *Low immunisation coverage rates: fact or fiction?* Unpublished Thesis for Membership of the Faculty of Public Health Medicine, the Royal College of Physicians of Ireland, Dublin, 1992.

Clover A, Hutchinson W and Judson D. *Promoting Children's Home Safety*. British Medical Journal, 1982; 258: 1177-1180.

Chubb, Basil, (1978) *The Constitution and Constitutional Change in Ireland*. Dublin: Institute of Public Administration.

Colley JR, Holland WW, Corkhill RT. *Influence of passive smoking and parental phlegm on pneumonia and bronchitis in early childhood*. Lancet 1974; 2:1031-4.

Combat Poverty Agency (2000) *Addressing Health Inequalities*. CPA, Dublin.

Commission on Health Funding (1989) -----

Comstock GW, Shah FK, Meyer MB, Abby H. *Low birth weight and neonatal mortality rate related to maternal smoking and socio-economic status*. Am J Obstet Gynecol 1971; 111:53-9.

Corcoran, B. *Road Traffic Accidents in North Dublin*. Unpublished Thesis submitted for the Membership of the Faculty of Public Health Medicine, 1986.

Coote, A. (ed) *The Welfare of Citizens: Developing new social rights*. London: IPPR / Oram Press.

Coughlin, A (1988) Social Policy in F Litton (ed) *The Constitution of Ireland: 1937-1987*. Dublin: Institute of Public Administration.

Denyer S, Thornton L, Pelly H, 1999. *Best Health for Children. Developing a partnership with families*. North Western Health Board, 1999.

Department of Health. *Perinatal statistics 1993*. Dublin: Stationery Office.

Department of Health. *Shaping a Healthier Future*. Department of Health, Dublin, 1994.

Department of Health. *A National Breastfeeding Policy for Ireland*. Department of Health, Dublin, 1994.

Department of Health.. *Developing a Policy for Women's Health*, 1995. Department of Health, Hawkins House, Dublin.

Department of Health and Children. *Youth as a Resource. Promoting the Health of Young People at Risk*. Department of Health and Children, Dublin, 1999.

Department of Health and Children. *Children First. National Guidelines for the Protection and Welfare of Children*. Department of Health and Children, Dublin, 1999.

Department of Health and Children. *Health Statistics*. Department of Health, Dublin, 1999.

Department of Health and Children, *Report of the Chief Medical Officer*. Dublin, 1999.

Department of Health and Children. *The National Health Promotion Strategy, 2000*. Department of Health and Children, Dublin, 2000.

Eastern Health Board, 2000. *Public Health at the Turn of the Century*. Department of Public Health Report, EHB, Dublin, 2000.

Eastern Health Board, Department of Public Health. *Public health in the Eastern Health Board region*. Dublin. EHB, 1998.

EUROCAT. *Report 7. 15 years of surveillance of congenital anomalies in Europe, 1980-1994*. Scientific Institute of Public Health – Louis Pasteur. Brussels, 1997.

Fitzgerald M, O’Flanagan D. *Immunisation uptake statistics for Ireland quarter 3, 2000*. National Disease Surveillance Centre. Epi-Insight April 2001, Vol. 2, issue 4.

Food Safety Authority of Ireland. *Recommendations for a national infant feeding policy*. FSAI, Dublin, 1999.

Freeman VE. *A longitudinal study of growth, feeding practices and iron status in healthy children from birth to two years of age*. Unpublished PhD Thesis. Trinity College, Dublin, 1996.

Friel S, Nic Gabhainn S, Kelleher C. *The national health and lifestyle surveys (Slan)*. Department of Health and Children, 1999.

Gortmacker SL, Walker DK, Jacobs FH, Ruch-Ross H. *Parental smoking and the risk of childhood asthma*. Am J Public Health 1982;72:574-9.

Hack M, Weissman B, Breslau N, Klein N, Borawski-Clark E, Fanaroff A. *Health of very low birth weight children during their first eight years*. J Pediatr 1993; 122:887-892.

Health behaviours of schoolchildren. -----

Heron SA, 1999. *A Question of Health: An Investigation of Psychological Health in Irish Traveller Mothers and Children*. Unpublished Thesis Submitted in Fulfilment of

the Requirements for MSc Thesis, Department of Psychology, Trinity College, Dublin.

Hynes M, Acton M. Teenage Health Initiative. Report and evaluation of a pilot project aimed at reducing teenage pregnancies in the Eastern Health Board area 1997-1998. Eastern Health Board 1998.

Irish Sudden Infant Death Association. *Childcare and SIDS. Information booklet for professionals*. ISIDA, Dublin, 1999.

Irish Sudden Infant Death Association. *National Sudden Infant Death Register. 1998 Report*. Dublin, ISIDA.

Jackson R, 1978. *Hazards of children in traffic*. Archives of Disease in Childhood; 53 : 807 – 813.

Johnson Z, Dack P, Fogarty J. *Small area analysis of low birth weight*. Ir Med J 1994;87:176-7.

Johnson Z, Howell F, Molloy B. *Community mothers' programme: randomised controlled trial of non-professional intervention in parenting*. BMJ 1993;306:1449-52.

Johnston C. *Cigarette smoking and the outcome of human pregnancies: a status report on the consequences*. Clinical Toxicology 1981; 18:189-209.

Kristjansson EA, Fried PA, Watkinson B. *Maternal smoking during pregnancy affects children's vigilance performance*. Drug and Alcohol Dependence 1989; 24:11-9.

Laffoy, M. *Accidents to Children in the Home*. Unpublished Thesis submitted for the Membership of the Faculty of Public Health Medicine, 1991.

Lewis, N and Seneviratne, (1992) *A Social Charter for Britain*. In: A Coote (ed) *The Welfare of Citizens: Developing new social rights*. London: IPPR / Oram Press.

Lyons RA. *Passive smoking and hearing loss in infants*. Irish Medical Journal 1995; 85: 111-2.

MacDorman MF, Cnattingius S, Hoffman HJ, Kramer MS, Haglund B. *Sudden infant death syndrome and smoking in the United States and Sweden*. Am J Epidemiol 1997;146:249-57.

Mc Bride SA. *Current Use of Tobacco, Alcohol and Some Other Drugs by Women of Childbearing Age; Perceived Risk and Attitudes to Use of These Substances in Pregnancy*. Unpublished Thesis submitted for the Membership of the Faculty of Public Health Medicine, 1985.

McDonnell R, Johnson Z, Doyle A, Sayers G, 1999. *Determinants of Folic Acid Knowledge and Use Among Antenatal Women*. J Public Health Medicine; 21 (2) : 145 – 149.

- McDonnell RJ, Johnson Z, Delaney V, Dack P. *East Ireland 1980-1994: epidemiology of neural tube defects*. J Epidemiol Community Health 1999;53:782-8.
- McKnight A, Merrett JD. *Smoking in pregnancy – a health education problem*. Journal of the Royal College of General Practitioners 1986; 36:161-4.
- McLeod A, Ross P, Mitchell S, Tay D, Hunter L, Hall A, Paton J, Mutch L. *Respiratory health in a total very low birth weight cohort and their classroom controls*. Arch Dis Child 1996; 74:188-94.
- Madeley RJ, Gillies PA, Power FL, Symonds EM. *Nottingham Mothers Stop Smoking Project – baseline survey of smoking in pregnancy*. Community Medicine 1989; 11:124-30.
- MRC Vitamin Study Research Group. *Prevention of neural tube defects. Results of the Medical research Council vitamin study*. Lancet 1991;338:131-7.
- National Health Promotion Strategy 2000-2005 -----
- Naeye RL, Peters EC. *Mental development of children whose mothers smoked during pregnancy*. Journal of the American College of Obstetricians and Gynecologists 1984; 64: 601-7.
- Neuspiel DR, Rush D, Butler NR, Golding G, Bijur PE, Kurzon M. *Parental smoking and post-infancy wheezing in children: a prospective cohort study*. Am J Public Health 1989;79:168-71.
- Nolan, Brian (2000) *Child Poverty in Ireland*, Dublin: Combat Poverty Agency.
- Nolan, B and Wiley, M (2000) *Private Practice in Public Hospitals*. Dublin: Oaktree Press.
- Office for National Statistics. *Living in Britain: results from general household survey 1996*. London: HMSO, 1998.
- Plant, R (1992) *Citizenship, Rights and Welfare*, In: A Coote (ed) *The Welfare of Citizens: Developing new social rights*. London: IPPR / Oram Press.
- Quinlan A. *Measles immunisation. Why is the uptake so low?* Unpublished Thesis for Membership of the Faculty of Public Health Medicine, the Royal College of Physicians of Ireland, Dublin, 1988.
- Royal College of Physicians. *Smoking and the Young*. London: Royal College of Physicians, 1992.
- Ryan CA, Ryan F, Keane E, Hegarty H. Trend analysis and socio-economic differentials in infant mortality in the Southern Health Board, Ireland (1988-1997). Ir Med J 2000; 93:204-6.

Sayers GM, Hughes N, Scallan E, Johnson Z. *A survey of knowledge and use of folic acid among women of child-bearing age in Dublin*. Journal of Public Health Medicine 1997;19:328-32.

Sayers G, Scallan E, McDonnell R, Johnson Z. *Knowledge and use of periconceptional folic acid among antenatal patients*. Irish Medical Journal 1997;90:236-8.

Sexton M, Fox NL, Hebel JR. *Prenatal exposure to tobacco:2. Effects on cognitive functioning at age three*. International Journal of Epidemiology 1990; 19:72-7.

South Eastern Health Board, 1998. *Our Children's Health*. Report of the Director of Public Health.

Southern Health Board, 1999. Report of the Director of Public Health, Southern Health Board.

Statistical Office of the European Communities. Eurostat. *Demographic Statistics 1997*. Luxembourg: Office for Official Publications of the European Communities, 1997.

The Scottish Low Birth Weight Study Group. *The Scottish Low Birth Weight Study I: survival, growth, neuromotor and sensory impairment*. Arch Dis Child 1992; 67:675-681.

Thornton L. *Smoking in pregnancy: behaviour, beliefs and attitudes of women attending a Dublin maternity hospital*. Dublin: Royal College of Physicians of Ireland, 1992, MFPHMI Unpublished Thesis.

Wilkinson, R and Marmot, M (eds) (1998) *Social Determinants of Health: The Solid Facts*. World Health Organisation.

UNICEF (2000) *Innocenti Report Card No 1*, UNICEF: Florence.

UN Committee on the Rights of the Child (1998) *Concluding observations on the Report Submitted by Ireland Under Article 44 of the Convention*.

U.S. Department of Health and Human Services. *The health consequences of smoking for women. A report of the Surgeon General*. Public Health Service 1980.

Weitzman M, Gortmacker SL, Walker DK, Sobol A. *Maternal smoking and childhood asthma*. Pediatrics 1990; 85:505-11.