The Scottish Government

The Effectiveness of Interventions to Address Health Inequalities in the Early Years: A Review of Relevant Literature

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THE EFFECTIVENESS OF INTERVENTIONS TO ADDRESS HEALTH INEQUALITIES IN THE EARLY YEARS: A REVIEW OF RELEVANT LITERATURE

Angela Hallam

Scottish Government, Health Analytical Services Division

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The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

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Angela Hallam
Public Health and Sport Team
Health Analytical Services Division
Scottish Government

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CHAPTER ONE – BACKGROUND INFORMATION

1.1 Introduction

The Scottish Government is committed to reducing inequalities in the early years and is therefore anxious to investigate the effectiveness of interventions that address a spectrum of issues, from early sexual activity through to the development of confident, secure, healthy school-age children.

The Government has inaugurated a Ministerial Task Force on health inequalities which reported to Cabinet in May 2008. One of the Task Force's main priorities is to investigate what works to address inequalities in the early years, given that inequalities appearing at this time often have a significant bearing on the subsequent development of the child, and its health, happiness and productivity in society. A number of papers have been prepared to inform the work of the Task Force: http://www.scotland.gov.uk/Topics/Health/inequalitiestaskforce/meetingandpapers.

The Scottish Government's Health Analytical Services Division (ASD) was asked to prepare this paper to:

- Investigate the relevant evidence base and advise policy colleagues of the known effectiveness of specific interventions

- Coordinate relevant information being gathered by colleagues across the Scottish Government and more widely to support policy development and delivery

This paper is the result of the work. In putting it together, ASD coordinated and analysed data from a number of sources. These included: publications/work in progress recommended and/or produced by colleagues within the Scottish Government, NHS Health Scotland and those conducting relevant research within universities and other organisations across Scotland. In the main, data fell into two categories: reviews of earlier work and primary studies. Source material was analysed as follows:

- *Reviews* - every attempt was made to extract data relevant to the inequalities agenda and to reproduce the authors' views on the effectiveness of interventions, the gaps in the evidence base and the methodological strengths and weaknesses of the evidence. In several instances the same material was found to have been used in more than one document, sometimes with different findings reported. As far as possible, such instances have been highlighted, although the original studies have not been revisited

- *Primary studies* - findings were synthesised and ASD assessed and commented on the quality of the data and the validity of any recommendations made by the researchers.

Consequently, this is not itself a systematic review of the relevant literature, and so we are not in a position to make evidence-based recommendations on interventions policy colleagues might want to consider/continue to support at the expense of other initiatives. However, we have tried to synthesise the messages into coherent messages for policy development and delivery.

For the purposes of this paper, the following definitions apply:
'early years' is defined as pre-, or peri-conception, to approximately eight years, in order to acknowledge the interface between health and education services
'early intervention' is described as 'an intervention which takes place prior to the onset of any difficulties for the individual, in order to prevent, or at least mitigate, those difficulties, and enable the individual to reach their full health potential' (Froggatt, 2007 (unpublished paper). Interventions can be directed at whole communities, or at individual families and communities at risk.

1.2 The national policy context

A range of national policy documents and initiatives in Scotland over the last few years are relevant to this agenda, although they are the products of previous administrations. These include:

- *Towards a Healthier Scotland (1999)* – acknowledges the profound effects of early influences on lifelong health. The White Paper on Health announced broad measures to support better child health and tackle health inequalities in the areas of children's nutrition; reduction of accidents; comprehensive screening, surveillance and immunisation programmes; and working across agencies to help children at risk through behavioural disorders and educational failure. Following publication, the Scottish Executive pledged £15million to support four national demonstration projects to act as test beds for action and learning. ('Starting Well' was the demonstration project in child health.) http://www.scotland.gov.uk/library/documents-w7/tahs-00.htm

- *For Scotland's Children (2001)* – explicitly calls for children's services to be considered as a single service system and for the coordination of needs assessment and intervention http://www.scotland.gov.uk/library3/education/fcsr-00.asp

- *Nursing for Health (2001)* and *Nursing for Health Two Years On (2003)* – place special emphasis on the targeting of services to the most vulnerable, and seek active integration between the NHS and local authority partners
http://www.scotland.gov.uk/Resource/Doc/158673/0043052.pdf;
http://www.scotland.gov.uk/Resource/Doc/47034/0013859.pdf

- *Improving Health in Scotland: The Challenge (2003)* – announces a focused approach to health improvement initiatives with five specific actions relating to the early years. These include ensuring that processes, action and approaches reach the most vulnerable families and children http://www.scotland.gov.uk/Resource/Doc/47034/0013854.pdf

- *Local Government in Scotland Act 2003* – seeks to recognise and support good practice in partnership working and advocates the improvement of information sharing processes across agencies
http://www.opsi.gov.uk/legislation/scotland/acts2003/asp_20030001_en_1

- *Health for All Children, fourth edition, 2003 (Hall 4)* – advocates both the service redesign of the Health Visitor role and greater multi-agency working; and places greater emphasis on the targeting of resources to greatest need and continued implementation of evidence-based practice http://www.dhsspsni.gov.uk/hssmd15-04.pdf (key messages)

- *The Mental Health (Care and Treatment) (Scotland) Act 2003* – places a specific responsibility on NHS Boards to provide specialist facilities for admitting mothers with their babies. Mental health problems which occur during pregnancy, or in the first postnatal year, affect 20-15% of women but, if detected, respond well to treatment. Although severe illness is relatively rare, its onset is usually rapid and requires urgent and appropriate intervention
  http://www.opsi.gov.uk/legislation/scotland/acts2003/asp_20030013_en_1

- *Respect and Responsibility: A Strategy and Action Plan for Improving Sexual Health (2005)* - aims to ensure that young people are able to make informed choices and to improve access to high quality education and sexual health services for all, including those who face discrimination
  http://www.scotland.gov.uk/Resource/Doc/35596/0012575.pdf

- *The Mental Health of Children and Young People: A Framework for Promotion, Prevention and Care (2005)* emphasises that the diverse range of early years and childcare services are a vital first 'frontline' in establishing good mental health and wellbeing among the youngest children, since risk factors and vulnerabilities in infancy and early childhood are associated with mental health problems in children and heightened risk of mental illness in adult life
  http://www.scotland.gov.uk/Resource/Doc/77843/0018686.pdf

- *Delivering for Health (2005)* – focuses on reducing the inequalities gap. Work is now proceeding on the provision of maternity services and the design of Specialist Children's Services in line with the actions set out in this document http://www.scotland.gov.uk/Resource/Doc/76169/0018996.pdf

- *Getting it Right for Every Child, (2006)* – sets out an approach involving practice change, legislation and removing barriers to ensure that the needs of children are met in an holistic way.
  http://www.scotland.gov.uk/Topics/People/Young-People/childrensservices/girfec

- *Delivering a Healthy Future*: *An Action Framework for Children's and Young People's Health in Scotland (2006)* – emphasises the importance of effective interagency working, and provision of support which is based on the best available evidence - designed to protect and promote health as well as treating disease - capable of addressing the needs of children who may be vulnerable or at risk, and delivered consistently and equitably throughout the country
  http://www.scotland.gov.uk/Resource/Doc/110080/0026619.pdf

- *Visible, Accessible, Integrated Care (2006)* – outlines a new service model intended to create nursing services in the community that support people to live healthier lives in their homes and reduce health inequalities

- *Delivering for Mental Health (2006)* – outlines specific commitments to improving mental health services for children and young people, including basic mental health training for those working with looked after and accommodated children and young people. It also focuses on enhancing perinatal services

http://www.scotland.gov.uk/Resource/Doc/157157/0042281.pdf

As the chapters of this paper will indicate, many of the health problems that need to be addressed by early intervention are the results of inequalities, or rather, differentially affect those in the most disadvantaged sections of society. Furthermore, it is important to break a cycle where poor outcomes are repeated across generations. Those who face disadvantage tend to have children younger and in circumstances where they are less prepared and face greater stresses. This is likely to affect their parenting skills and, hence, their ability to give their children the best start in life.

1.3 Introduction to the evidence base

A number of summary papers/reports have been used throughout this document, because of their relevance to the evidence base in relation to some (or all) of the topics covered. The usefulness of these papers to policy colleagues and other stakeholders is likely to extend beyond this document, so a brief summary of the content of the papers/reports is provided below.

Asthana and Halliday (2006) *'What Works in Tackling Health Inequalities: Pathways, policies and practice through the lifecourse'*.
This book provides research review evidence on four critical life stages, including 'early life.' Although the policy background relates primarily to England, the evidence base is international and the book provides helpful information, both about effective interventions and the problems associated with ensuring evaluation of effectiveness is appropriate. The authors suggest that research evidence supports three key targets for intervention in early life: *smoking cessation*; *nutrition*; and *parenting education.*

The book has been particularly useful in putting this paper together because of the helpful way in which it summarises the existing evidence, identifies gaps and points out methodological weaknesses in the evaluative work carried out to date.

Sutton et al (eds) (2004) '*Support from the start: working with young people and their families to reduce the risks of crime and anti-social behaviour'*
This report draws attention to the evidence that it is possible to recognise factors, even before birth, that place young children at increased risk of behavioural and other problems as they grow older. It also describes factors that make it less likely children will experience these problems and considers support services capable of reducing risk increasing protections. The authors are practitioners as well as researchers, so the report reflects their hands-on experience, as well as their knowledge of relevant research studies. The particular focus of the report is on the scope for preventing crime and 'anti-social behaviour.' The report is divided into four main life stages: pregnancy; birth to two years; three to eight years; nine to 13 years. For the purposes of this paper, only the first three stages have been considered.
http://www.dfes.gov.uk/research/data/uploadfiles/RR524.pdf

Moran et al (2004) *'What works in parenting support? A review of the International evidence'*
This review provides the distillation of the overarching messages from the international (English language) literature on the effectiveness of parenting support programmes. Both

universal and targeted services are included. Programmes are sorted into four categories: 'what works,' 'what is promising,' 'what does not work,' and effectiveness 'not known'.

The review includes profiles of all the parenting programmes considered as part of the work that have been robustly evaluated, or have become popular and well known among service providers, although evidence testifying to their effectiveness may still be forthcoming. Salient summary details have been used where relevant in this paper. The full programme profiles can be found on pages 137-175 of the review.
http://www.prb.org.uk/wwiparenting/RR574.pdf

Infant Mental Health: A Guide for Practitioners (2007)
The Short Life Working Group on Infant Mental Health (drawn from health, early education, social services and the voluntary sector) met between December 2005 and May 2006. The Group's remit was to examine models of good practice in Scotland and elsewhere for the promotion of good mental health both in low-risk and high-risk families, and to make recommendations for a strategy for Scotland to ensure the best outcome for all babies. Additional research into the evidence base of effectiveness for various interventions was conducted by two members of the Group.

The output from the Group is a concise and readable summary of the current evidence in a range of topic areas, which has the advantage of being practically oriented. Consequently, services highlighted in the document are included in several places throughout this paper. The search strategy used to identify effective interventions is not detailed in the published version of the report, however, and it is not clear why several of the projects described were selected as specific examples of good practice.
http://www.headsupscotland.co.uk/documents/Infant%20Mental%20Health%20-%20Good%20Practice%20Guide%20-%20Final%20Edit.pdf

Growing Up in Scotland
The Growing Up in Scotland study (GUS) is an important new longitudinal research project aimed at tracking the lives of a cohort of Scottish children from the early years through childhood and beyond. Focusing initially on a cohort of 5,217 children aged 0-1 and a cohort of 2,859 children aged 2-3, the first wave of fieldwork began in April 2005.

Where relevant, a brief summary of findings from the first sweep of the survey is included to provide context to individual chapters of this document. A series of documents which summarise key findings to date is available on the Growing Up in Scotland website: http://www.growingupinscotland.org.uk/

1.4 Layout of this paper

This paper focuses on specific key areas:

- Pregnancy at a young age
- Maternal and foetal health during pregnancy
- Maternal and child nutrition and physical and mental health
- Child development and early education
- Parenting in the early years
- Groups that are particularly vulnerable
- The longer term impacts of investment in the early years

The documents which have contributed to this paper focus on specific issues or/and slice the topic areas in different ways so, in coordinating them, it is inevitable that there should be some overlap. The most logical approach seemed to be to look at issues particularly relevant to pregnancy, from birth onwards, from three to eight years, initiatives targeting particular vulnerable groups and what is known of the longer term impacts of investment in the early years. Naturally, some issues (such as infant oral and dental health and accidents and injuries), and certain of the initiatives to address them, are relevant throughout the early years, but have been included in one of the 'birth onwards' chapters because of the importance of intervention at an early stage of the child's life. The final chapter draws together key messages about the effectiveness of interventions that have been rigorously evaluated, areas where the evidence base is lacking, and methodological issues that need to be addressed by future research.

Much of the literature comes from other parts of the world, particularly the US, so findings may not be transferable to the Scottish context. Evidence which relates specifically to Scotland is made clear and, throughout the paper, short reports on Scottish initiatives (as part of the international evidence base on a particular topic) have been boxed in the text, for easy reference.

Given the complexity of the evidence base underpinning the various topics, shaded boxes throughout the text include summaries of what we know about the effectiveness of interventions to address particular issues or, where a single initiative (such as Sure Start) has been discussed in detail, whether and how it has been evaluated to date.

CHAPTER TWO PREGNANCY

2.1 Introduction

There is a large body of evidence to suggest that risk for many chronic conditions is set, at least in part, in foetal life or immediately after birth. Asthana and Halliday (2006) summarise the effects of under-nutrition and other adverse influence on the body's structure, physiology and metabolism. For example:

- Airway and alveolar growth can be impaired in the lungs of a foetus deprived of calories or oxygen. This may have an important effect on childhood respiratory illness and risk for chronic bronchitis in later life
- Low protein intake during pregnancy has been linked to impaired development of the kidneys that may in turn lead to raised blood pressure in adult life
- Early under-nutrition adversely affects healthy brain development
- Growth retardation in utero has been linked to important metabolic changes that increase risk for later obesity, cardiovascular disease, hypertension and diabetes

Maternal substance misuse has a range of direct and indirect effects on foetal growth and development. Smoking is associated with low birth weight, intrauterine growth restriction, placental abruption, premature rupture of the membranes and pre-term delivery. Alterations in lung functions have been reported with in utero exposure to smoking and an increased risk of asthma, pneumonia and bronchitis reported in children of smokers. Smoking causes direct damage to the blood vessels of the placenta and affects the flow of oxygen to the foetus. Carcinogens are carried across the placenta and individuals exposed to tobacco smoke in the womb may be at increased risk of developing certain types of cancer. The development of ovaries and testes also appear to be affected by smoking: a woman whose mother smoked has a greater chance of starting her periods early and of having a miscarriage, while boys are more likely to have undescended testes. Thus, smoking has an impact on more than one generation (Selwyn, 2000, p 27).

Alcohol can also interfere with normal foetal development. Foetal Alcohol Syndrome (FAS), the main features of which are poor growth, abnormal facial features and cognitive impairment, appears only to arise in a small percentage of cases where sustained heavy drinking occurs throughout all three trimesters of pregnancy. However, the foetus is susceptible to alcohol's toxicity throughout its development and exposure to high levels of alcohol (particularly binge drinking) during critical periods has been linked with adverse pregnancy outcomes (Whitty and Sokol, 1996).

Drug use during pregnancy has also raised concerns about persistent adverse effects (Arendt et al, 1999; Chiriboga et al, 1999) and these are not limited to the use of illegal substances. Evidence suggests that maternal use of paracetamol in late pregnancy increases risks of wheezing and elevated Immunoglobulin E in children of school age (Shaheen et al, 2005).

Foetal growth is also influenced by factors such as uterine blood flow and the capacity of the placenta to metabolise key nutrients, transfer nutrients to the growing foetus and produce hormones that influence foetal and maternal nutritional supply. For example, stress-related hormones may constrict blood flow to the placenta, so the baby may not receive the nutrients and oxygen it needs for optimal growth. Stress may also indirectly increase risk of adverse exposure to the foetus, by influencing maternal behaviours such as cigarette smoking and

alcohol consumption, both of which interfere with normal foetal development. High levels of stress have also been linked with elevated levels of a hormone associated with early delivery, with implications for low birth weight (Hobel et al, 1999; Schulkin, 1999).

The rate of preterm birth has risen over time in Scotland, from 5.5% in 1990-02 to 6% in 2000-02[1]. Strong links are known to exist between low birth weight and inequality. For example, in a ten year study in England, Smith et al (2007) found that women from very deprived areas were at twice the risk of very preterm birth as those living in the least deprived areas.

In addition, a number of risk factors for children's subsequent behaviour and mental health problems relate to pregnancy. In a major longitudinal study involving 7,500 women in England, Glover and O'Connor (2002) found that women who experienced high anxiety at 32 weeks gestation were twice as likely as other mothers to have a child with behavioural and/or emotional problems at age four. However, this was not found to be the case with mothers who were anxious at 18 weeks and not thereafter (quoted by Sutton et al, 2004).

This chapter considers the evidence base in relation to four major risk factors for foetal development, where women from low socio-economic groups are particularly vulnerable:

- Pregnancy at a young age
- Maternal nutrition during pregnancy
- Smoking during pregnancy
- Stress during pregnancy

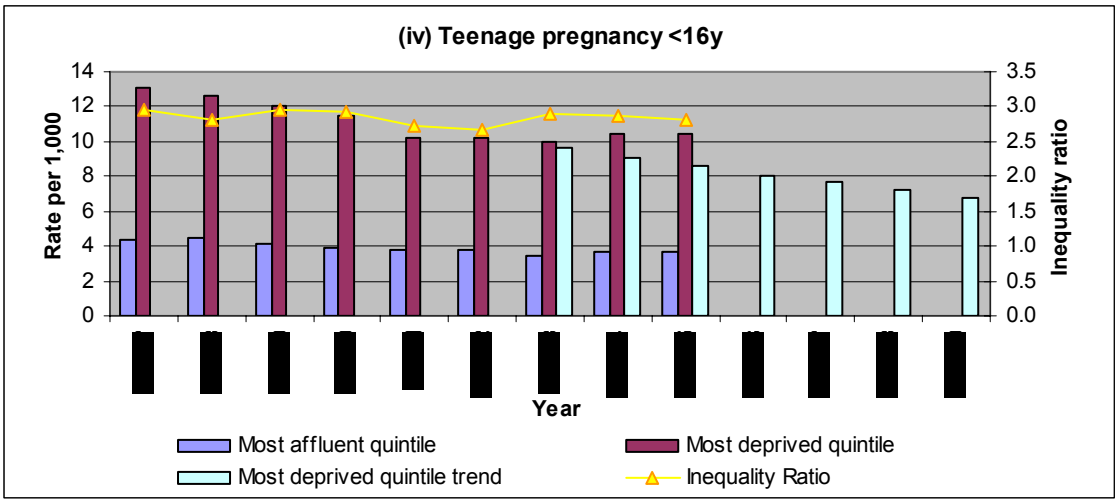
It should be noted that, in contrast to smoking, poverty does not appear to be strongly associated with alcohol consumption among British women (Marmot, 1997). The picture in Scotland does not differ from the rest of the UK: data from the Scottish Health Survey indicate no clear relationship between Scottish Index of Multiple Deprivation (SIMD) quintiles and drinking behaviour (Scottish Health Survey, 2003). In the first sweep of the Growing Up in Scotland (GUS) survey, lone parents and younger mothers were less likely to say they drank while pregnant than parents in couple families and older mothers; and mothers living in more deprived areas were less likely to say they drank while pregnant than those living in less deprived areas (Anderson et al, 2007).

Naturally, however, alcohol and other drugs have major impacts on life in deprived households. In the GUS survey, one in ten respondents in the lowest income quartile said they had used drugs in the last year, compared with 2% in the highest and second highest quartiles. Nine percent of parents in routine and semi-routine households used drugs in the last year, compared with 2% of those in managerial or professional households (Anderson et al, 2007). GUS data also indicate that mothers in the most deprived areas were significantly more likely to say they drank five or more units on one occasion than those in less deprived areas. For these reasons, alcohol and other drugs are included in Chapter Seven, where initiatives targeting specific vulnerable groups are considered.

[1] Information Services NHS Scotland Scottish Programme for Clinical Effectiveness in Reproductive Health, 2005

2.2 Pregnancy at a young age

Figure 2.1: Teenage pregnancy: GROS registered births, stillbirths and Notifications (to the Chief Medical Officer for Scotland) of abortions performed under the Abortion Act 1967



Teenage pregnancy has been associated with prenatal depression and anxiety, risks that reflect both cumulative life course exposure to stressors and current circumstances. Teenage mothers are more likely to have suffered separation, divorce, step-parents, and the early transition to motherhood can cause stress on adolescent relationships, compromise antenatal health and further affect educational attainment and longer-term opportunities, often resulting in long-term benefit dependency and poverty (Chevalier and Viitanen, 2003; Swann et al., 2003).

In Sweep 1 of the GUS study, mothers in the highest income quartile were over twice as likely as those in the lowest income quartile to say that the pregnancy had been planned (78% compared with 35%). Pregnancy is also less likely to be planned in the teenage years than in later life. The majority of mothers under 20 (61%) said their pregnancy had not been planned at all (GUS, 2007).

While teenage pregnancy is strongly associated with socio-economic disadvantage, the relationship is even more pronounced for early motherhood. Several studies have shown that young women in areas that are socially deprived are less likely to use abortion to resolve unplanned pregnancy than their counterparts in wealthier areas (Lee et al, 2004; Social Exclusion Unit, 1999). The latter report suggests possible reasons for this:

'a teenager who has a financially and emotionally secure background; and sees a clear future for herself through education or work; has something to lose from early parenthood.' 'But the alternatives will look very different to a teenager who has grown up in poverty and possibly on benefits, has had difficult family relationships, is in care, or is under pressure to move out; and sees no prospect of a job and expects to be on benefit one way or the other. For such a teenager, being a parent could well seem to be a better future than the alternatives.'

The GUS study found that, in terms of attendance at antenatal classes, there was marked variation by socio-economic group and by maternal age at birth:

- Around two thirds of those aged under 20 did not attend any classes; three quarters of those aged 30-39 went to most or all classes
- Women from non-white ethnic groups were less likely than women from white ethnic groups to have attended classes
- Women with lower levels of educational attainment were less likely to attend classes than those with higher qualifications (mothers who had a degree were six times more likely to attend classes than those with no qualifications) (GUS, 2007)

2.2.1 What works to improve sexual health and avert pregnancy at a young age? Evidence and practice (Asthana and Halliday)

- There is good evidence to support school-based sex education; education linked to contraceptive services alongside the community-based delivery of education, development and contraceptive services; youth development programmes; and family outreach (although this is not supported by evidence from Randomised Controlled Trials (RCTs))[2]
- Campaigns to address sexually transmitted infections (STIs) increase condom use and can delay initiation and reduce the frequency of sexual activity, potentially reducing unintended pregnancy as well
- Programmes that offer educational support or improve job prospects may motivate young people to avoid pregnancy
- Parenting programmes and antenatal care programmes may be effective in improving outcomes for both teenage mothers and their infants (see below and Chapters Four and Five)

2.2.2 Lack of Review-level evidence

There is a lack of review-level evidence in the following areas;

- Focus on early fatherhood
- Upstream interventions versus poverty and disadvantage
- Interventions relating to Scotland and the rest of the UK (most of the evidence comes from the US)

In addition, there are more general limitations to the evidence base;

- Poor methodological quality of many of the studies covered and focus on different outcomes, making synthesis difficult
- A diversity of approaches makes it difficult to assess the efficacy of universal programmes as opposed to initiatives targeting particular vulnerable groups (e.g. non-school attendees, looked-after children, the homeless, children of teenage parents, black and minority ethnic groups)

[2] One expert who commented on a draft of this document noted that the most coherent research on schools based programmes is to be found in Hope P and Sharland P (1988) *Tomorrow's Parents,* Calouste Gulbenkian Foundation. I have not managed to access this, but am told it suggested that the content of such programmes was not ideal and was often delivered by the wrong people, without the necessary material and background. Given the age of the paper, findings may no longer be relevant.

The Report of the Expert Working Group on Infant Mental Health (HeadsUpScotland, 2007) includes reference to the *Baby Think It Over* (BTIO) programme, in which young people are given a realistic, computerised model baby to care for during 72 hours as part of a parenting education package in secondary schools. Although there is no good evidence that the programme reduces pregnancy rates directly, it has been shown to reduce the wish of teenagers to become parents at an early age.

There is currently no UK evidence of the effectiveness of BTIO, but the Expert Working Group suggest that it could provide a valuable source of realistic feedback on the demands of caring for a young baby. However, ad hoc use of baby simulators, without the support of lessons plans to deliver key messages around relationships and self-development, has received unfavourable press in the media in the past. It is known that an educational initiative with secondary school pupils which uses baby simulators as one part of a programme linked to the curriculum is being piloted in Glasgow. This programme is about to undergo academic evaluation to assess its effectiveness.

The Expert Working Group also suggests that the 'computer games culture' and the wide familiarity of such games to children and young people opens up new options for introducing health education material to children and young people. The popularity of games such as NINTENDOGS and BABYZ, in which the player has to take care of animals or children, suggests that these games are accessible and interesting to quite young children. If professional input was included to ensure the correct messages are being given and a commercial games manufacturer undertook the production and distribution of a more sophisticated game, the Expert Working Group suggests that this could have a wider and sustaining impact.

Summary: what do we know about averting pregnancy at a young age?

- Evidence supports school-based sex education and community-based education and contraceptive services
- Campaigns to increase condom use can delay initiation and reduce the frequency of sex
- Educational support and improved job prospects may motivate young people to avoid pregnancy
- Parenting programmes and antenatal care programmes may improve outcomes for both teenage mothers and their infants
- However, there is little evidence relating specifically to Scotland; and inadequate focus on early fatherhood and on interventions tackling broader 'upstream' issues of poverty and disadvantage
- The methodological quality of many existing studies is poor and/or focused on a range of outcomes, making it difficult to draw meaningful messages about the effectiveness of individual interventions
- A promising initiative, although not yet evaluated in the UK, is the 'Baby Think It Over' programme, in which a young person is given a computerised model baby to care for. A pilot programme in Glasgow, which uses baby simulators as part of the secondary school curriculum on relationships and self-development, is about to undergo evaluation
- The popularity of computer games offers opportunities to engage young people in games involving the care of young babies

2.3 Maternal nutrition

A rapid evidence review carried out for the Scottish Government by NHS Health Scotland in August 2007 explored the potential for health improvement offered by dietary improvement in women of childbearing age and pregnant women and highlighted means which have been shown to be effective in achieving such improvement.

The review considered literature from 1995 onwards and specifically focused on women on a low income/living in low-income communities. However, the paper makes it clear that this was a very rapid appraisal of the evidence, intended to bring out key points only for consideration in developing Spending Review proposals (NHS Health Scotland, 2007).

2.3.1 Summary of possible reasons to intervene to improve maternal nutrition, and detail of the evidence to support them

- Reducing the incidence of neural tube defect (NTD) pregnancies – ***good evidence***
  - there is strong evidence to link the taking of the recommended levels of folate/folic acid during the periconceptual period and first 12 weeks of pregnancy with reduced incidence of NTD-affected pregnancies
- Reducing incidence of low birth weight – ***little evidence***
  - evidence linking dietary improvement during pregnancy with reduced incidence of low birth weight is equivocal, but there is unlikely to be a link between the two. Weight at outset of pregnancy, and maternal weight gain during pregnancy, may be more important predictors of the baby's weight at birth
- Improving the later health of offspring – ***good evidence***
  - existing justifications for improving maternal diet, in particular maternal nutritional status at the onset of pregnancy, appears to be more critical than nutritional adequacy during pregnancy for foetal growth
  - there is good evidence to support a role for diet in foetal programming in utero for later adult chronic disease. Emerging evidence suggests that maternal nutrition may also have long term effects in offspring which are not reflected in birth weight or any other measure of body size at birth
- Improving management of pregnancies in nutritional terms (e.g. less excess maternal weight gain) – ***no evidence to support or refute this***
- Increasing likelihood of breastfeeding – ***no evidence to support or refute this***
- Encouraging healthy weaning and other healthy dietary behaviours in the new family and as children grow up – ***no evidence to support or refute this***
- Improving general nutritional health and hence reduce diet-related risk factors for CHD, cancer, stroke – ***good evidence exists, but was not searched out specifically for this paper***

The paper concluded that the nutritional and health-related outcomes policy makers might reasonably hope to influence through are focus on maternal nutrition are:

- Incidence of NTD affected pregnancies
- General nutritional intake and nutritional status of women of childbearing age in low income areas
- Reduced risk in offspring of chronic disease in later life

The key international policy document which relates to maternal nutrition is the *European Strategy for Child and Adolescent Health Development: Action Tool* (WHO, 2005). This sets out a number of actions recommended by W.H.O. and other international agencies, presented as a menu of policies and interventions from which national and local authorities can select according to need. Areas judged relevant to maternal nutrition policy in Scotland (by the author of the rapid evidence review) are:

- Setting up food fortification programmes of iron, folic acid and iodine
- Setting up information, education and communication programmes on healthy motherhood and prevention of congenital abnormalities
- Providing advice on nutrition during antenatal visits and as part of health advice to parents
- Preventing micronutrient deficiencies through supplements when food fortification is not ensured
- Ensuring provision of micronutrients to primary health care services and maternity services
- Providing training in nutritional advice and intervention of first line health professionals

Evidence from Scotland: Review of the Scottish Diet Action Plan 1996-2005 (Lang et al, 2006)

The review team considered that 'Minor' progress had been made by the Health Education Board for Scotland (now NHS Health Scotland) and Health Boards between 1996 and 2005 towards ensuring that health promotion activity includes regular campaigns to alert potential parents to the need for good nutrition prior to, as well as during, pregnancy.

However, Lang et al estimated that 'Substantial' progress had been made towards the provision of dietary information from frontline professionals to expectant mothers about their own nutritional needs, and the nutritional needs of their babies. This includes both provision of literature and individual counselling.

2.3.2 Evidence with a focus on women in low income groups

The author of the rapid evidence review noted that there is little good quality evidence from the UK about interventions to improve the nutrition of low income women of childbearing age. One good quality study among inadequately nourished low income women in the UK concluded that dietary counselling alone is unlikely to improve nutritional intakes and that consideration should be given to the provision of free folate and iron supplements to all women in low income groups during the inter-pregnancy interval.

The key initiative targeting women on a low income which has been evaluated is the US Women, Infants and Children Program. However, the quality of the evaluation was compromised by non-compliance in the control groups, meaning that there was insufficient high quality evidence to demonstrate the benefit of the initiative.

No studies on increasing folic acid intake among low income women specifically were identified, either in the UK or in other developed countries.

2.3.3 Evidence with a focus on low income pregnant women

One recent UK study indicates success in a scheme which provided vouchers to pregnant women to increase their fruit juice consumption. The same study reported that midwife advice on dietary improvement during pregnancy had no great effect.

An intervention comprising several informal food preparation sessions in a community centre setting failed to attract interest from the pregnant young women on low income who were invited to participate. The authors noted the challenges of working with the most disadvantaged groups.

2.3.4 What works to improve maternal nutrition during pregnancy? Evidence and practice (Asthana and Halliday)

- Calcium supplements reduce preterm birth and the incidence of low birth weight, especially among women at risk of hypertensive disorders
- Dietary supplementation based on balanced protein and energy content consistently improves foetal growth.

2.3.5 Lack of review-level evidence re maternal nutritional supplements

- The evidence base is weak on targeted evaluations focusing on particular socio-economic, ethnic or vulnerable groups, those subject to multiple risks from smoking, poor diet and negative psychosocial factors.
- Most trials are conducted in mid to late pregnancy, which may be too late to compensate for long-standing nutritional deprivation. Changes to maternal nutrition before conception and in early pregnancy may have a greater influence on foetal growth
- Studies tend to focus on single interventions which are unlikely to reduce the rate of a multicausal outcome, such as intrauterine growth retardation, and which ignore the potential for nutrient-on-nutrient interactions.
- Factors such as stress may have a more pronounced effect on foetal nutrition and hence birth weight than has been acknowledged to date

Summary: what do we know about the effectiveness of initiatives to address improving maternal nutrition?

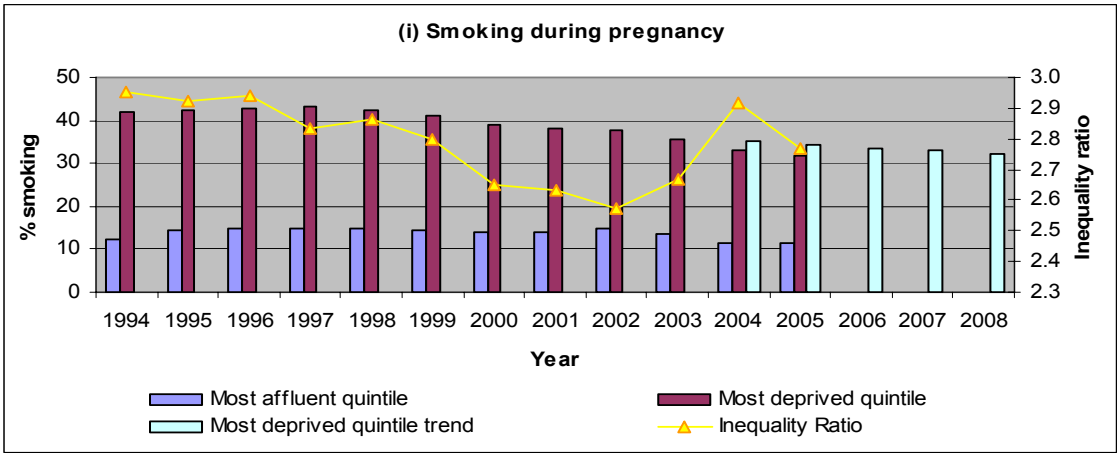
- Good quality evidence relevant to Scotland is very limited
- There are significant challenges in engaging young, low income mothers-to-be
- There is strong evidence to suggest that certain dietary supplements reduce risks in pregnancy and preterm birth.
- Maternal nutritional status at the onset of pregnancy appears to be more critical than nutritional adequacy *during* pregnancy for foetal growth
- Maternal nutrition may also have long term effects in offspring, which are not reflected in any measure of body size at birth
- Providing advice and information alone is not enough to change dietary behaviour; the more intensive and direct the intervention (e.g. as vouchers, provision of food or provision of supplements) the greater the chance of success in improving nutritional

status
- Factors such as stress may have a more pronounced effect on foetal nutrition and hence birth weight than has been acknowledged to date

2.4 Smoking cessation

The use of tobacco in pregnancy is one of the most important risk factors for foetal growth and development. A considerable number of women give up smoking without assistance during pregnancy, with the largest group (up to one quarter) stopping before their first antenatal visit (Lumley et al, 2001). However these tend to be light and moderate smokers (Jane et al, 2000). The proportion of pregnant women who smoke not only remains substantial, but is also significantly associated with socio-economic disadvantage. The GUS study found that about a quarter of women sampled said they smoked while pregnant: 4 in 10 mothers in areas in the most deprived quintile smoking during pregnancy, compared with just 9% in the least deprived quintile. (GUS, 2007). An inequalities dimension is also evident in the proportion of infants exposed to smoking in their own homes. A detailed study of lone parents living in rented accommodation and relying on social security benefits found smoking levels in excess of 75% (Dorsett and Marsh, 1998).

Figure 2.2: Smoking during pregnancy: ISD Scotland (SMR02 maternity records)



2.4.1 What works to help smoking cessation during pregnancy? Evidence and practice (Asthana and Halliday)

- Advice and support tailored for pregnant women has been shown to have only a modest effect on cessation rates; and a tendency not to reach, or to be acceptable to, those at highest risk (potentially exacerbating the inequalities dimension)
- Prenatal counselling, combined with at least 10 minutes person-to-person contact and written material tailored to pregnancy can double cessation rates, although self-help literature on its own tends to be ineffectual
- The frequency of contact with health professionals in the prenatal period offers increased opportunities for intervention but, historically, this potential has been under-utilised.

- Recent large-scale studies suggest that results in real-life settings are often less favourable than those conducted in clinical trials, and that attrition rates are highest among those on a low income and among the most mobile populations
- Even reducing smoking in pregnancy can improve health outcomes
- There is some evidence that increasing support for smoking cessation during pregnancy and its subsequent maintenance could affect breastfeeding rates and thus be a legitimate component of a breastfeeding support programme
- Evidence relies too heavily on self-reported behaviour and does not take into account the different experiences of heavy and light smokers.

Evidence from Scotland: Randomised controlled trial of home based motivational interviewing by midwives to help pregnant smokers quit or cut down (Tappin et al, 2005)

- A large controlled trial of the use of motivational interviewing with pregnant smokers in the West of Scotland was carried out between 2001 and 2005. (Motivational interviewing is a one-to-one counselling style designed for treating addictions)
- Women in the intervention group were offered two to five home visits from midwives (in addition to standard services)
- The study found that good quality motivational interviewing did *not* significantly increase smoking cessation among pregnant women
- The research is particularly interesting because participants' self report was corroborated by plasma or salivary cotinine concentration
- It is not clear whether outcomes for women in more deprived circumstances were better or worse than for those with fewer disadvantages

Promising initiative in Scotland: Smoking cessation incentive scheme

- A pilot scheme in Dundee encourages pregnant women to give up smoking by offering vouchers that allow smokers to buy fresh fruit and vegetables, have free access to leisure centres, crèche facilities, relaxation classes and cinema tickets providing they do not smoke during pregnancy
- To qualify, expectant mothers have to prove they are staying smoke free, by passing weekly breath tests for carbon monoxide levels in their lungs
- The programme is intended to target 10 women per month. Between May and November 2007, 33 women were attracted to the scheme
- The scheme was hoped to double or triple one-year cessation rates (from 13-15%). Early signs from the pilot indicate good levels of client compliance
- Early findings from the initiative were discussed at a meeting of Angus Community Health Partnership Committee in November 2007, at which plans to introduce a similar scheme within Angus were highlighted
- It is not known whether a formal evaluation of the Dundee pilot is taking place

Summary: what do we know about the effectiveness of initiatives to address smoking cessation during pregnancy?

- Evidence indicates that multi-faceted initiatives are more likely to be effective than those offering a single service
- Advice and support for pregnant women may not reach, or be acceptable to, those at highest risk
- Routine contact with health professionals during the prenatal period offers opportunities for intervention that have been under-utilised to date

- Increasing support for smoking cessation during pregnancy and the immediate postnatal period may affect breastfeeding rates, so could be a legitimate part of a breastfeeding support programme
- Evidence relies too heavily on self-reported behaviour and does not take into account the different experiences of heavy and light smokers

2.5 Maternal stress during pregnancy

No study has yet evaluated a programme or service designed to reduce maternal stress during pregnancy. However, this is an area where a well-designed and professionally-delivered home visiting programme, such as the *Nurse-Family Partnership (*described and evaluated in the United States) appears especially promising.

2.5.1 Nurse-Family Partnership

This programme offered to young, disadvantaged pregnant women, most of whom are unmarried and without previous children comprises regular home visits by purpose-trained nurses throughout pregnancy and, in some cases, the first two years of their children's lives. The support provided includes:

- parenting and health education
- referrals to other services
- employment advice
- help forming mutual support networks

The three longitudinal studies detailed below evaluated the programme as typically implemented in a low income community, thus providing evidence of the intervention's effectiveness in a real-world setting. All three studies achieved a follow up rate of at least 80%. However, when considering the evidence from these studies, it should be borne in mind that comparison with the programme comprised minimal routine intervention which, in the US, would be very different from UK health visiting services. (The Nurse-Family Partnership is currently being implemented in 10 test sites in England, but it is not known whether there are plans to submit the initiative to rigorous evaluation.)

The first longitudinal evaluation of the intervention was conducted by Olds et al (1998). This was a randomised controlled trial involving 400, mostly white, women, most of whom were unmarried and of low socioeconomic status. Women were allocated to one of three regimes: fortnightly visits during pregnancy; fortnightly visits in pregnancy and during the first two years of the child's life; a comparison group that had no visits.

The nurse visitors focused on three aspects of the mothers' experiences:

- positive health-related behaviours during pregnancy and the early years of the child's life
- competent care of the children
- maternal personal development (including family planning, educational achievement and opportunities to gain employment)

Not only did the home visiting yield positive early results in terms of lower levels of child abuse, fewer premature babies and heavier babies born to teenage mothers, (compared with

control groups) but it also had long-term effects on children's behaviour, including fewer arrests and convictions by the age of 15.

The follow-up study also found that the adolescent children of the mothers who had received support had fewer behavioural problems relating to the use of alcohol and other drugs and smoked less than the children of mothers in the comparison group. Positive changes were also noted among the mothers who received support from the programme in respect of lower dependence on state benefits, fewer subsequent births, fewer arrests and fewer convictions than mothers in the comparison group mothers. There was also suggestive evidence that the above effects were largest for the subgroup of unmarried women of low socioeconomic status, and their children (Olds et al, 1998).

The second study involved a randomised controlled trial of 743 low income, mostly African-American women, who were randomly assigned to an intervention group that received nurse-visits and a control group which did not. This study measured outcomes when their children were aged 2 and again at the age of 6.

There were no significant effects on children's birth weight, or mental development or behavioural problems at aged 2, but the intervention group had 20% fewer health care encounters for children's injuries or ingestions and 80% fewer injuries and ingestions requiring hospitalisation. At the second follow up at the age of 6, children in the intervention group were much less likely to exhibit severe behavioural problems (1.8% vs. 5.4%). For the subgroup of nurse-visited women with poor mental health, low self-confidence and low intelligence, their children demonstrated superior intellectual functioning compared to control group counterparts. Nurse-visited women had fewer subsequent births and fewer months on welfare than women in the control group. However, the programme had no effect on the women's education, employment, substance use, rate of marriage or partnership, or experience of domestic violence (Kitzman et al, 1997; Kitzman et al, 2000; Olds et al, 2004a).

A third major randomised controlled trial (735 low income women, half of whom were Hispanic) involved random assignment to nurse visitation; visitation by a paraprofessional (who underwent the same training and provided the same services as the nurse); or a control group. This study measured outcomes when the children reached the age of 4.

At the follow up, there were no significant effects on child outcome measures for the whole sample of nurse-visited women, but the children of women with poor mental health, low self-confidence, low intelligence has superior language skills, better capacity for sustained attention, impulse control, sociability and motor skills than their control group counterparts.

Women who received nurse visits had longer intervals between the births of their first and second children, and were less likely to report being victims of domestic abuse (7% versus 14%) but there were no significant effects on the women's educational achievement, welfare receipt or employment, or likelihood of being married or living with a partner.

Paraprofessional-visited mother-child pairs in which the mother had low psychological resources interacted with one another more responsively than their control group counterparts, but there were no other statistically significant paraprofessional effects (Olds et al, 2002; 2004b).

Summary: what do we know about the effectiveness of the Nurse-Family Partnership programme?

- Evidence from randomised controlled trials show a major impact on life outcomes for socio-economically deprived mothers and their children
- Evidence comes from the programme as typically implemented in a low income community
- Children of nurse-visited mothers were less likely receive health care for injuries and ingestions in the first two years of life
- Although the programme had no significant effect on children's behavioural problems at age 2, a much lower percentage of children of nurse-visited mothers exhibited severe behavioural problems at the age 6 follow up
- The study that included a 15 year follow up found that the children of nurse-visited women experienced fewer arrests and fewer incidents of child abuse and neglect.
- Mothers who had received nurse visits experienced fewer arrests and convictions, spent less time on welfare and had fewer subsequent births
- Visits from trained paraprofessionals did not achieve the same effects as the nurse-visiting programme
- The programme is particularly interesting because outcomes for both mothers and children are most promising for the most disadvantaged groups
- In the absence of UK replication research, this is important evidence of the potential effectiveness of an intensive, antenatal home visiting programme that offers 'multiple' support – as long as that support is sustained during the first years of life.
- However, it is not clear whether findings are transferable to countries where health services are provided free at the point of delivery. The service received by mothers in the US comparison groups would also be very different from health visiting services in the UK

2.6 Antenatal classes

There is a wide availability of antenatal classes and other supports from the health service in Scotland during pregnancy. However, the Growing Up in Scotland (GUS) survey suggests that a key issue is the degree to which teenage parents and those living in disadvantaged areas access the support that is available, and whether the support that is offered meets their needs.

In the first sweep of the GUS survey, around one third of mothers aged under 20 attended some antenatal classes, compared with approximately three-quarters of those aged 30 to 39 and two-thirds of those aged over 40. The most common reason given for non-attendance was that mothers had experienced a previous pregnancy and had attended classes at that time, but mothers in the youngest age group were significantly more likely than mothers in the older age groups to cite reasons such as not liking classes or groups, and not knowing where classes were run (GUS, 2007).

The Expert Working Group on Infant Mental Health noted that evidence of the effectiveness of psychosocial information introduced into antenatal education is poor. Little research has been carried out on the content of antenatal classes, and what there is gives little support to the inclusion of information on parenting. Most antenatal classes are offered in the last trimester of pregnancy, concentrate on delivery and are used preferentially by more middle class parents. The Expert Working Group's report highlights the Sunderland Infancy Project,

which has been able to engage parents identified by the midwifery or health visiting service as being at risk of difficulties with their children. Parents participate in 6-session antenatal groups with a psycho-social and developmental theme at around 20 weeks, before the impending birth becomes imminent and all consuming. The authors claim that families engaged in this group have shown an increased involvement in supportive postnatal services, although no reference to evaluation material is included (HeadsUpScotland, 2007).

Initiatives which include antenatal contact and support as part of a wider portfolio of support are specifically addressed in Chapters 4 and 5. However, it is worth mentioning here that part of the work of a literature review carried out as part of a national audit of parent education (McInnes, 2005) specifically focused on initiatives which aim to change or improve parenting skills in the antenatal period. The original literature review that was included in the national audit included studies published between 1992-2003. This literature review was updated in 2006 to include studies published between 2003-2006.

Findings from both the original literature review and the update can be summarised as follows:

- Nine studies were identified: six from the USA, four from Australia, three from the UK (including one from Scotland) and one from Latin America
- All studies addressed an aspect of parenting via the provision of knowledge, education or information.
- Educational or informational interventions were shown to improve knowledge, but had less impact on behaviour or psychosocial wellbeing.
- The most successful interventions appeared to be those providing a range of health education topics in the antenatal clinic (although the studies focusing on these were not assessed as high quality)
- There was some evidence that involving the mother's partner and/or using a flexible approach contributed to the intervention's success

Both the author of the original literature review and the update note that despite some positive findings, there remains significant gaps in the evidence base. In particular, evidence concerning hard to reach groups or groups with special educational needs is lacking. The author also noted that the interventions set out to measure a diverse range of outcomes, using assorted methods to deliver interventions. This makes it difficult to extract firm conclusions or recommendations for practice.

2.6.1 PIPPIN

PIPPIN is included here because it is a UK-based initiative and has received international commendation as an example of excellence.

PIPPIN is designed to improve and maintain parents' emotional and psychological wellbeing and help them prepare for parenthood. The focus on emotional aspects of adjusting to parenthood is not usual in antenatal classes, which typically focus on the birth and physical aspects of looking after a baby.

Staff from a variety of professions, and volunteers, are trained for 50 hours to deliver group meetings and individual, home based sessions. Groups are intended to include fathers as well as mothers, and meetings take place from the 24th week of pregnancy, continuing at regular,

infrequent intervals until the infant is 3-5 months. Each new family receives approximately 35 hours of support in all.

PIPPIN targets both mainstream and hard-to-reach families. The initiative appears to be operating in England only at present, but it is an element of individual Sure Start programmes.

It appears that only one evaluation has been carried out to date. This compared 49 couples who completed the course with 57 similar couples who were not involved. No differences were found before the course, but afterwards participating parents were significantly more confident, less anxious or vulnerable to depression and better able to cope with parenthood. They enjoyed more positive relationships with their babies and with each other (Parr, 1996). Two or three years later, their children appeared calmer and more confident than those in the comparison group (Parr, 1997, 1998). Apart from findings from this study, the only other evidence relates to internal auditing in areas where the programme has been implemented. These indicate that the positive outcomes in the original study have been maintained (Sure Start, 2002).

Despite the rather thin evidence base, the programme was recommended by the Health Select Committee Report as 'an important and effective preventative child mental health initiative, which local authorities and trusts as well as central government should encourage and support in order to ensure its long-term development.' The Expert Committee for the European Regional Council of the World Federation for Mental Health commended PIPPIN as an example of excellence in its 1998-99 report and PIPPIN is also recommended by the Sure Start Guide to Evidence Based Practice (Hosking and Walsh, 2005).

Summary: what do we know about the effectiveness of antenatal provision?

- A key issue is the degree to which parents living in disadvantaged areas are able to access the support that is available, and whether they feel it meets their needs
- Educational/informational interventions can improve knowledge, but are less likely to have an impact on behaviour or psychosocial wellbeing
- Providing a range of health education, psycho-social and developmental topics in antenatal clinics, and looking at the stage in pregnancy when parents are likely to be most receptive appears to be a promising approach, but better quality evaluation of initiatives is required
- PIPPIN uses a variety of professionals and volunteers to engage fathers as well as mothers in preparing for (and adjusting to) parenthood. Support begins during the last 3 months of pregnancy and continues until the infant is 3-5 months old. A single, small sample evaluation indicated that the initiative helped parents to enjoy more positive relationships with their babies and with each other
- Little research has been carried out on the content of antenatal classes, and there is little evidence relating to Scotland or the rest of the UK

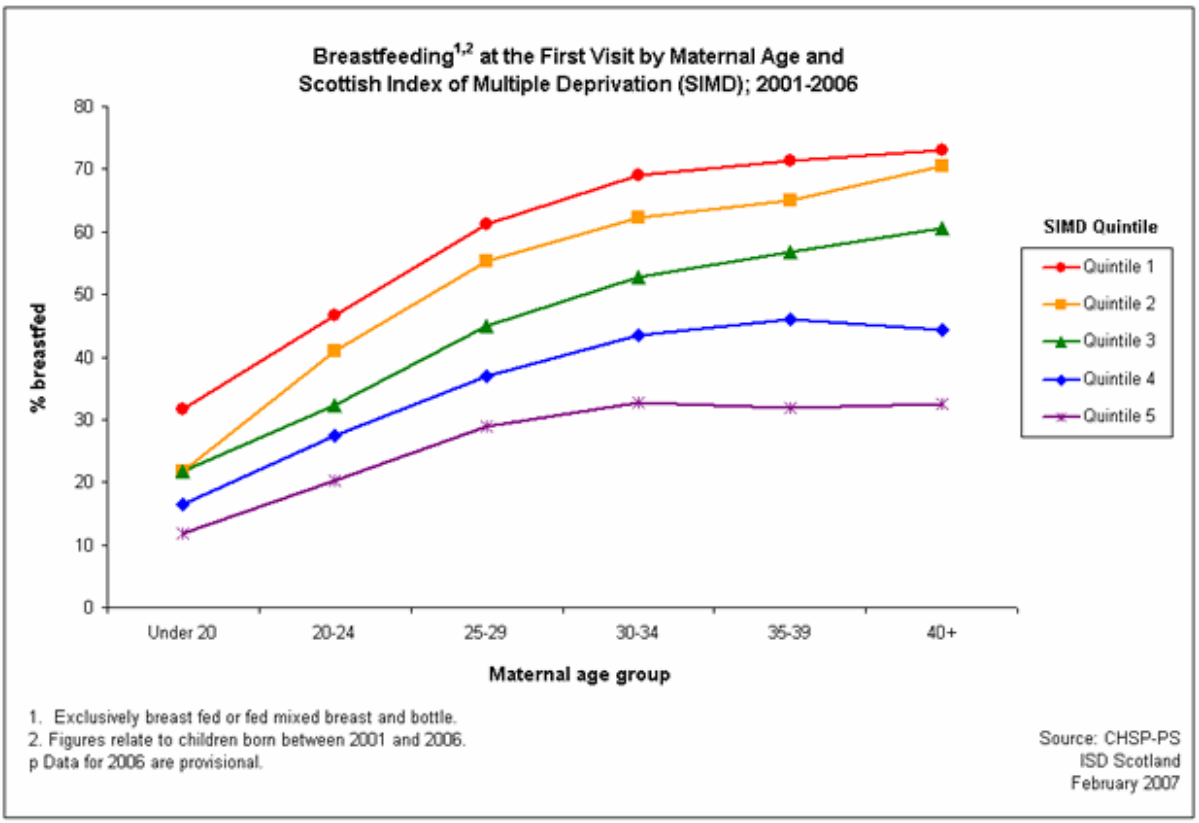
CHAPTER THREE BIRTH ONWARDS – NUTRITION, SMOKING CESSATION AND SAFETY IN THE HOME AND COMMUNITY

3.1 Breastfeeding

Breastfeeding has a major role to play in public health, promoting health in both the short and long term for baby and mother. As well as providing complete nutrition for the development of healthy infants, human breast milk has an important role to play in protection against gastroenteritis and respiratory infection. There are also strong indications that breastfeeding plays an important role in preventing otitis media, urinary tract infection, atopic disease, juvenile onset insulin-dependent diabetes mellitus and obesity. Breastfeeding is also beneficial to the mother's health. Women who do not breastfeed are significantly more likely to develop epithelial ovarian cancer and pre-menopausal breast cancer than women who breastfeed. Other benefits for the breastfeeding mother include the increased likelihood that she will use up the body fat deposited in pregnancy (Protheroe et al, 2003 includes a number of references for each of these findings).

The UK has one of the lowest rates of breastfeeding worldwide, especially among disadvantaged families. In Scotland, figures from the Information Statistics Division (February 2007) indicate that both maternal age and deprivation have an independent effect on breastfeeding. Breastfeeding rates are higher in the less deprived areas and, within each deprivation quintile, breastfeeding rates generally improve as maternal age increases.

Figure 3.1 Breastfeeding at the first visit by maternal age and Scottish Index of Multiple Deprivation (SIMD): 2001-2006



Early findings from the GUS study indicate that levels of intended and actual breastfeeding varied greatly across different groups. Older mothers, those in higher income households and those with higher levels of educational qualifications were much more likely to have intended to breastfeed, to have done so at all, and to have still been breastfeeding at 6 months. Only 8% of mothers aged under 20 who breastfed at all were still doing so at 6 months, compared with 33% of those aged 30-39 and 40% of those aged 40 and over (GUS, 2007).

Evidence from Scotland: Modelling consultation rates in infancy: influence of maternal and infant characteristics, feeding type and consultation history (McConnachie et al, 2004)

- A 6-month cohort study of newborn babies was carried out at 13 general practices in Glasgow
- Multilevel models were used to analyse the number of consultations for each baby during its first 26 weeks
- Adjusting for other factors, babies breastfed at the time of discharge from hospital had consultation rates 15% lower than babies fed formula milk, lending weight to the costs and benefits associated with efforts to increase breastfeeding
- Findings add to previous research linking breastfeeding with reduced morbidity in infancy
- Low socioeconomic status did not appear to be an independent predictor of infant consultations, but two factors associated with deprivation (lower maternal age and formula feeding) are major contributors towards an apparent link between deprivation and higher consulting rates found in univariate analyses

Five key types of intervention designed to promote the initiation of breastfeeding have been identified in the literature (NHS CRD, 2000; Protheroe et al, 2003):

- Health education interventions
- Health sector initiatives
- Peer support programmes
- Media campaigns
- Multi-faceted interventions

3.1.1 Summary of the international evidence base re initiation and duration of breastfeeding (Asthana and Halliday, 2006)

- Health education – small, informal discussion classes, led by health professionals that emphasise the benefits of breastfeeding and provide practical advice can increase initiation rates. However, one-to-one education sessions may be necessary to persuade women to breastfeed when they have already decided to feed infant formula
- Health sector initiatives –
    - changing organisational structures to make it easier to promote breastfeeding – multifaceted approaches include health education, changes to maternity ward practice to encourage unrestricted breastfeeding, skin-to-skin contact, advice and treatment

    - training of health professionals – few training courses have been formally evaluated, but evidence suggests that training is most likely to be effective when delivered as part of a package and on a mandatory basis[3]
- Peer support programmes – Initiation rates can be increased among low-income women if they include a peer support component. Such programmes offer contact over time with role models often lacking in deprived communities and counter problems non-professional women may have in seeking advice from professionals. Standalone effectiveness is restricted, however, to those women who wish to breastfeed
- Multi-faceted interventions – efficacy is increased if sessions are broad-based, span the ante and postnatal period and draw on repeated contacts with either a professional or peer educator

3.1.2 Lack of review-level evidence re breastfeeding

There is a lack of review-level evidence re breastfeeding in the following areas:

- Media campaigns - evidence relating to the success of media campaigns is scarce and dated, although research suggests that their potential to raise awareness and promote breastfeeding is effective as part of a multifaceted intervention
- Evaluation of public policy; for example, rest periods or flexible working arrangements on return from maternity leave to encourage mothers to continue breastfeeding
- Whether a supportive environment (public acceptability and no social barriers to breastfeeding) encourages mothers to breastfeed

3.1.3 Evidence from the UK - NICE and the Health Development Agency

A number of relevant documents were published in England between 2003 and 2006. Protheroe et al (2003) *The effectiveness of public health interventions to promote the initiation of breastfeeding,* published by the Health Development Agency, provided a review of reviews of the evidence base. Only two reviews met the criteria for inclusion (Tedstone et al, 1998 and Fairbank et al, 2000) and, in general, findings appear to be superseded by Asthana and Halliday. However, from an inequalities perspective, there are one or two additional findings of interest.

- Health education –
    - Breastfeeding literature and formal education delivered to low income groups in the USA were not effective at promoting the initiation of breastfeeding, although evidence was based on small-scale studies
    - Paying participants to attend increased participation rates for group classes
    - Promotion efforts may be assisted by including partners, providing incentives and changing the content of commercial hospital packs given to women on discharge from hospital, although evidence is not strong
    - The least successful interventions were those where breastfeeding promotion was only one part of a multiple health promotion programme

[3] A key stakeholder who commented on the current paper wished to make the point that health professional training is vital not only in terms of providing appropriate practical support, but in understanding and appreciating reasons for breastfeeding, and their role in promoting it

- Health sector initiatives – one UK based RCT evaluated the effect of social support for socially disadvantaged women (home visits and telephone calls from a midwife on hospital discharge). No significant difference was reported in initiation rates between the intervention and control groups, but feedback given by the women was positive and suggested that they valued a midwife listening to them
- Peer support programmes – qualitative research exploring why some women on low incomes do not want to breastfeed concluded that breastfeeding is a practical skill. Confidence and commitment to breastfeed successfully are best achieved by exposure to breastfeeding, rather than talking or reading about it
- Multi-faceted interventions – effective multi-faceted interventions have included a media campaign in combination with health education programmes, training of health professionals, a peer support programme and/or changes in government and hospital policies. Evidence from Sweden indicates the effectiveness of a combination of problem-based information about breastfeeding (written mostly for and often by mothers); increased availability of mother-to-mother support groups; increase in paid maternity leave with guaranteed return to previous employment; changed maternity ward practices. However, no evaluation has been undertaken to examine which, if any, of these aspects was more effective, or if the combined package was necessary.

NICE: The effectiveness of public health interventions to promote the duration of breastfeeding: systematic review (Renfrew et al, 2005)
This paper follows on from the previous review of interventions to promote the initiation of breastfeeding. However, only 17 studies (21%) examined the needs of women from disadvantaged groups. Ways of raising breastfeeding rates among groups where the rates are lowest remain to be explored further. The review identified a number of gaps in the evidence base, but all of these are included in the 2006 NICE paper (see below).

NICE: Promotion of breastfeeding initiation and duration: Evidence into practice briefing (Dyson et al, 2006)
This document (published later than Asthana and Halliday's summary, although individual reviews used here were included by Asthana and Halliday) presents evidence based actions for promoting the initiation and/or duration of any and/or exclusive breastfeeding among full term, singleton, healthy babies. The evidence based actions include all population groups, with a particular focus among population groups where breastfeeding rates are low.

The actions were formulated through the integration of published scientific literature with practitioner expertise and experience. Studies of effectiveness from four systematic reviews (Fairbank et al, 2000; Protheroe, 2003; Renfrew et al, 2005; Tedstone et al, 1998) were assessed against agreed criteria, including recognised quality appraisal criteria. A list of 'plausible evidence-based actions' for practice were drawn up based on the available studies considered to be of good quality. These were then used as the basis of a national consultation with a range of mainstream practitioners and representatives of service users, with the aim of moving from a list of 'what works from international research evidence' to 'what will really work in practice in England.' Eight actions were identified:
- Baby Friendly Initiative[4] (BFI) in maternity and community services. In particular, all maternity hospitals should be encouraged to attain the BFI Full Accreditation Award to

[4] The Baby Friendly Initiative (BFI) is a worldwide programme of the World Health Organization and UNICEF. It was launched in 1992 to encourage maternity hospitals to implement the Ten Steps to

increase initiation rates for all women; and hospitals with a BFI Certificate of Commitment should progress to the BFI Full Accreditation Award to increase breastfeeding initiation for all women.

- An appropriate mix of education and/or support programmes to be routinely delivered by both health professionals/practitioners and peer supporters in accordance with local population needs. Focus on informal, practical sessions, breastfeeding-specific problem solving support, peer support to provide information and listening support to women on low incomes, to increase initiation and duration rates
- Changes to routine policy and practice within the community and hospital settings to encourage unrestricted baby-led breastfeeding; teach breastfeeding technique and provide sound information and reassurance for breastfeeding women with 'insufficient milk.'
- Routine policy and practice for clinical care in hospital and community should abandon restriction of the timing and/or frequency of breastfeeds during immediate postnatal care; restriction of mother–baby contact; supplemental feeds given without medical reason in addition to breastfeeds; separation of babies from mothers for the treatment of jaundice; provision of hospital discharge packs which include promotional information for formula feeding
- Peer or volunteer support delivered by telephone to complement face-to-face support in the early postnatal period
- Breastfeeding education and support from one professional should be targeted to women on low incomes to increase rates of exclusive breastfeeding
- One-to-one needs-based breastfeeding education through the first year should be available to increase intention, initiation and duration rates, particularly among white, low income women
- Local media programmes should be developed to target teenagers to improve and shift attitudes towards breastfeeding

The briefing paper identifies the following gaps in the evidence base:

- UK based studies
- Evaluations of interventions directed at particular groups where rates of breastfeeding are low
- Participants' views of interventions.
- Studies evaluating the effects of supportive environments (e.g. breastfeeding facilities outside the home)
- Large, good quality studies evaluating the ways national media campaigns can be used to shift cultural values for breastfeeding to be recognised as a cultural norm
- Large scale, high quality UK evaluations of the BFI in the community.
- Studies evaluating the effects of non-health sector interventions (such as school programmes targeting both girls and boys prior to pregnancy)
- Studies addressing clinical problems associated with breastfeeding (such as 'insufficient milk,' sore nipples)
- Studies including outcomes related to costs for families, employers and health services

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Successful Breastfeeding and to practise in accordance with the International Code of Marketing of Breastmilk Substitutes. The BFI came to the UK in 1994 and, in 1998; its principles were extended to cover the work of community health care services in the Seven Point Plan for the Promotion, Protection and Support of Breastfeeding in Community Health Care Settings.

Methodological weaknesses in the evidence base

- Terms 'breastfeeding,' 'exclusive breastfeeding' and 'partial breastfeeding' were often used loosely or left undefined, leading to confusion as to whether babies were fed only breast milk or received additional fluids
- Lack of information about how women were recruited into the studies suggests that many participants volunteered. This means there may be sample bias within the studies reviewed, leading to non-representative samples affecting study findings
- Papers often lacked the information needed to evaluate an intervention and or replicate it in the future
- Potential confounders for evaluating breastfeeding were not always taken into account (e.g. whether a mother was a first-time mother; mother's feeding intention)
- Power and sample size calculations were often omitted, making it impossible to assess the adequacy of the study
- Outcome assessment was rarely validated and attrition was often high or unreported
- The relative effectiveness of different intervention components was not evaluated within individual studies, and neither was the effect of the same intervention on different sub-groups.

3.1.4 Evidence from Scotland: the Breastfeeding Expert Group

In October 2003, the Breastfeeding Expert Group (BEG) was convened under the auspices of the Early Years National Learning Network at NHS Health Scotland. This group was charged with a remit to assemble the best available evidence to support Scotland's efforts to increase rates in breastfeeding initiation and duration.

The membership of BEG was multi-agency and multidisciplinary, comprising policy makers, practitioners and academics, all with interest and expertise in breastfeeding issues. BEG's membership provided an opportunity to capitalise on the respective strengths of a wide range of professions. The Early Years National Learning Network has a specific remit to disseminate lessons learned from Starting Well; so two of the project's health visitors were members of this group. Also, bearing in mind the work of the HDA and (subsequently) NICE, a lead person from the HDA was included in the group.

BEG welcomed the publication of the HDA review in 2003 and acknowledged the work (in development at the time) on the subsequent documents produced by NICE. Notwithstanding the value of these documents, BEG members recommended that the evidence base could be usefully augmented by the consideration of issues missing from the NICE review:

- A consideration of psychosocial issues related to infant feeding, (including an assessment of the measurement tools used in breastfeeding research)
- A focus on breastfeeding of babies in neonatal units
- Published qualitative data on beliefs, attitudes and experiences of infant feeding.

Evidence was obtained by systematically reviewing published studies that were published in English and considered to be culturally relevant, to complement the NICE report. The reviews were carried out by two independent reviewers and BEG members commented upon successive drafts of the review. The final drafts were subjected to both an academic peer and practitioner review process, the feedback of which has been responded to in the final report.

Three sections of the full report are particularly relevant to addressing inequalities. Each of these will be considered in turn.

Breastfeeding in neonatal units. A review of breastfeeding publications between 1990-2005 (McInnes and Chambers, 2006a)
This report presents a review of publications on evaluations of interventions to support breastfeeding in neonatal units. Babies admitted to such units are more likely than others to come from families who experiencing inequalities in terms of health. Thirty-six papers listed in medical electronic databases between 1990 and June 2005 which had breastfeeding or the provision of breast milk as an outcome and which targeted low birthweight or premature infants or their parents or were based in a neonatal unit were identified.

The papers comprised 25 randomised controlled trials (RCTs), eight quasi-experimental, one randomised trial, one case-control and one cohort study.

Summary of the evidence from the reviewed articles:
- Most authors acknowledged that breast milk benefited preterm or high risk infants but that achieving breastfeeding success was less likely among mothers of these infants
- The publications targeted a diverse range of topics (e.g. the use of bottles, cups, teats or dummies; parental support, staff education, skin-to-skin care or Kangaroo Mother Care (KMC)[5], early discharge from the neonatal unit, breast milk fortifiers, the Baby Friendly Initiative (BFI)) so the pooling of common themes was limited.
- The largest published evidence base was for KMC, where studies consistently demonstrated advantages for the infant in terms of physiological stability, reduced morbidity and improved breastfeeding rates. The majority of KMC studies were based in developing countries, but may provide significant advantages for the infant, the mother and health services within the UK
- Other interventions were less conclusive with only one cup-feeding study showing a positive result compared to three demonstrating no significant differences in breastfeeding. Other interventions, which may have a positive impact on breastfeeding duration, were supplementation by naso-gastric tube (NGT) rather than bottle, use of powder fortification of breast milk rather than a liquid and the Baby Friendly Initiative (BFI).
- Few studies followed up the population beyond discharge and only two interventions were shown to have an impact beyond three months: KMC (2 studies) and supplementation by NGT (1 study)
- Only five of the 36 studies were conducted in the UK

Gaps in the evidence
- In general the studies focused on quantifiable, physical aspects of care and did not fully address the potential emotional barriers to breastfeeding and/or expressing breast milk
- A variety of clinical outcomes were recorded for most studies and 25 papers measured breastfeeding outcome, usually at the point of discharge from the neonatal unit. None of the studies evaluated maternal satisfaction with their experience of breastfeeding and/or the expressing of breast milk often under very difficult circumstances. There was also

[5] Kangaroo mother care is a method of care of pre-term infants which involves infants being carried, usually by the mother, with skin-to-skin contact.

limited assessment of the long-term impact on breastfeeding continuation or maternal satisfaction

- There was an overall lack of good quality UK based studies.

Infant feeding: A review of qualitative studies exploring psychosocial factors relating to infant feeding and the breastfeeding of babies in neonatal units 1990-2005 (McInnes and Chambers, 2006b)

This report presents a synthesis of qualitative studies that explored the psychosocial factors related to breastfeeding, and breastfeeding in neonatal units from the perspective of the parent/s and/or health professionals. The search was limited to papers from the UK and other developed countries: 54 papers listed in medical electronic databases (between 1990 and June 2005) which addressed a psychosocial aspect of breastfeeding, or targeted low birth weight or premature infants and/or their parents or were based in neonatal units were identified. Twenty-three papers were based in the UK.

Summary of the evidence from the review of qualitative studies

- Despite variations in breastfeeding rates, many issues were common across the range of countries (e.g. the unacceptability and difficulty of breastfeeding in public, the influence of a mother's social network, the lack of health service support for breastfeeding and the negative representation of breastfeeding in the media)
- Issues affecting mothers of infants in neonatal units were similar to those affecting other mothers, e.g. confidence in their ability to breastfeed, breastfeeding in public, the influence of the social network and health service support
- Successful breastfeeding was associated with confidence and high self-esteem, working in harmony with the baby, a commitment to breastfeeding and a determination to overcome problems. Mothers were holistic in assessing their infant's health and the adequacy of breastfeeding, and made breastfeeding a priority in their lives.
- Successful breast feeders usually had a supportive social network and received praise and recognition for their efforts as well as practical help. They tended not to see health service support as the most important source of support, thus minimising any effect of conflicting advice
- Unsuccessful breast feeders reported greater incongruity between their expectations and the reality of breastfeeding. Concerns about breast milk inadequacy were common, and the behaviour of the infant, was often taken to indicate a lack of milk. Emphasis was placed on weight gain as external verification of breastfeeding success
- Mothers who were unsuccessful at breastfeeding often had an unsupportive social network and frequently felt undermined in their attempts to breastfeed, thus relying more on health service support, which was not always forthcoming. These mothers were particularly susceptible to conflicting advice
- Unsuccessful breast feeders tended to give up if breastfeeding became problematic and resented the lack of freedom associated with breastfeeding, desiring instead to get their lives and/or bodies 'back to normal'
- Breastfeeding was particularly undermined by detrimental practices (e.g. the use of dummies, supplementary feeding) and the pervasive bottle-feeding culture associated with some low-income areas
- Mothers identified a number of key areas as being unsupportive of breastfeeding: their lack of knowledge about the practical and emotional aspects of breastfeeding, lack of encouragement to breastfeed from social networks and from health care professionals, lack of appropriate and effective support once breastfeeding was initiated, negative

attitudes of some societies to breastfeeding (especially in the UK), disapproval of breastfeeding in public; difficulties combining breastfeeding and employment.

A number of recommendations are made by the review:

- Breastfeeding education and promotion prior to conception is required, for prospective fathers as well as mothers. The introduction of breastfeeding education in schools should be considered. Once pregnant, individualised advice on the value of breastfeeding may encourage women to choose to breastfeed. Thereafter, education should focus on realistic emotional and practical issues (including problem solving), with greater exposure to real breastfeeding mothers
- Health professional support needs to be effective, timely and acceptable. This requires appropriate and skilled staffing in postnatal wards who consider breastfeeding as a priority.
- Health professionals should identify the mother's individual breastfeeding goals and help her to achieve them, with provision of appropriate information/advice and techniques to build her confidence in herself as a new mother
- Health professionals should explore techniques for teaching mothers to express breast milk, including computer simulation
- The expressed views and attitudes of society have an important impact on the success of breastfeeding. Every effort should be made to encourage public breastfeeding as the social norm and pressure should be brought to bear on the media to enhance the representation of breastfeeding. The methods used to enable mothers to combine breastfeeding with work should be evaluated
- Mothers who intend to bottle-feed also require adequate preparation and information. Health services should follow WHO/UNICEF[6] advice about the support of bottle-feeding mothers and avoid being judgmental or unsupportive

Summary: what do we know about the effectiveness of interventions to support breastfeeding?

- The evidence base on the initiation and duration of breastfeeding is relatively comprehensive, although research relating specifically to Scotland is sparse
- Multi-faceted interventions, focused specifically on breastfeeding, appear to be the most effective. Interventions should span the ante and postnatal period and draw on repeated contacts with professionals and/or peer educators
- A review of evaluations to support breastfeeding in neonatal units found considerable support for Kangaroo Mother Care (KMC), with studies consistently demonstrating advantages for the infant in terms of physiological stability, reduced morbidity and improved breastfeeding rates
- Eight actions were identified by NICE on the basis of evidence from systematic reviews:
  - support for the Baby Friendly Initiative in maternity and community services
  - a mix of education and/or support programmes routinely delivered by health practitioners and peer supporters
  - changes to policy and practice to encourage and promote breastfeeding
  - clinical care to support mother-baby contact
  - peer or volunteer support for mothers in the early postnatal period

[6] WHO/UNICEF. Protecting, Promoting & Supporting Breastfeeding - the Special Role of Maternity Services. A joint WHO/UNICEF Statement, WHO, Geneva, 1989.

- breastfeeding education and support targeted on women on low income
- one-to-one needs-based education throughout the first year
- local media programmes to target teenagers to improve attitudes to breastfeeding

- Gaps in the evidence base include: evaluation of interventions directed at groups where rates of breastfeeding are low; participants' views of interventions; evaluations of national media campaigns; evaluations of the Baby Friendly Initiative; evaluation of the effects of interventions targeting girls and boys prior to pregnancy; studies addressing clinical problems associated with breastfeeding; studies including outcomes related to costs; studies addressing the potential emotional barriers to breastfeeding

3.2 Exposure to passive smoking in early life

Asthana and Halliday (p 157) claim that increasing support for smoking cessation during pregnancy and its subsequent maintenance could affect breastfeeding rates and thus be a legitimate component of breastfeeding support programmes.

3.2.1 What works to help smoking cessation in the postnatal period? Evidence and practice (Asthana and Halliday, 2006)

- The most effective strategies concentrate on strengthening parents' faith in their ability to create a smoke-free environment, and on behavioural strategies to achieve this goal, rather than focusing on stopping smoking. There is evidence in favour of interventions delivered by clinicians in both the home and the clinic (e.g. information, advice and counselling) But studies tend to rely on self-reported behaviour rather than biochemical measures
- Intensive counselling increases knowledge, but few studies show a statistically significant intervention effect in terms of attitudes and behaviour (and hence exposure to environmental tobacco smoke (ETS) as opposed to changes in knowledge). There was, however, a generally observable reduction in child ETS exposure for participants
- Smoking bans with widespread public support are a prerequisite for the adoption of smoking restrictions at home, since interventions to decrease exposure to second-hand smoke 'can act as a method to 'de-normalise' tobacco use … and smoking prevalence will fall as a result'

Evidence from Scotland: Evaluation of smoke-free legislation

- Health Scotland, in conjunction with Information Services Division Scotland and the Scottish Government, have developed a comprehensive evaluation strategy to assess the short, immediate and long term outcomes of the smoking ban
- Early findings indicate that there is no evidence of smoking shifting from public places into the home
- There is a high level of public support for the legislation even among smokers, whose support increased once the legislation was in place

3.2.2 Limitations to the evidence base on smoking cessation/passive smoking

There are a number of key areas where the current evidence base provides a poor foundation for policy and practice. These include:

- The efficacy of individual components of a programme (including the effectiveness of interventions when delivered by different medical staff in different settings)
- Features that might increase cessation among particular risk groups (such as heavy smokers and/or women of lower socio-economic class)
- Strategies that are effective against relapse
- Interventions that include the family as a whole and are culturally appropriate

There are also methodological problems with much of the research carried out to date. For example:

- Too great a reliance on self-reported behaviour
- Failure to take into account confounding variables such as age and socio-economic status
- Failure to consider the very different experiences of heavy and light smokers

Summary: what do we know about the effectiveness of initiatives to help smoking cessation in the postnatal period?

- Supporting parents to achieve a smoke-free home environment appears to work better than focusing on stopping smoking.
- Smoking bans with widespread public support are a prerequisite for the adoption of smoking restrictions at home
- Early findings from the evaluation of smoke-free legislation in Scotland indicates that there is no evidence of smoking shifting from public places into the home
- However, research to date has relied too heavily on self-reported behaviour and has failed to focus on the impact of factors such as socioeconomic status and the different experiences of heavy and light smokers

3.3 Maternal and child nutrition

Poverty is associated with food insecurity, hunger and poor diet, with the poorest 10% of households spending a higher proportion of their income on food, but consuming less in real terms. The Avon Longitudinal Study of Pregnancy and Childhood found that only three nutrients among the 20 studied in the diets of women were unaffected by financial constraints (Rogers and Emmet, 1998). Children living in households on Income Support appear at particular risk, although research suggests that parents frequently forsake food themselves in order to feed their children (Dowler et al, 2001).

Nutritional interventions for early life have tended to focus on the health of the pregnant mother and the subsequent adequacy of the diet, measured primarily through infant health gain. With greater acknowledgement of the lifecourse approach, there is now increasing interest in the effects of nutritional status on long-term health.

Guidance for midwives, health visitors, pharmacists and other primary care services to improve the nutrition of pregnant and breastfeeding mothers and children in low income

households is expected to be published by NICE in February 2008. NHS Health Scotland has been a stakeholder for the work and will be producing a commentary on the guidance once it is published.

3.3.1 Nutrition in the weaning and post-weaning period – evidence and practice (Asthana and Halliday, 2006)

- Income measures; improvements in accessibility and movements to promote cheap food in the community; and community cafes are all considered to be of greater relevance to improving nutrition than nutritional education through didactic means
- The evidence indicates the importance of early intervention, and the promotion of breastfeeding as an integral part of a much wider nutritional agenda

3.3.2 Lack of review-level evidence on nutrition in the weaning and post-weaning period

There is a lack of review-level evidence on nutrition in the weaning and post-weaning period:

- There is limited evidence in support of promoting good feeding practice in the weaning and post-weaning period
- There is a paucity of nutritional intervention aimed specifically at families with young children
- A focus is needed on key target groups such as low-income and minority ethnic families, and to consider the relationship between early nutrition, income and work

3.3.3 Limitations to the evidence base on nutrition

- It is difficult to assess exactly what works, because of a lack of structured evaluation, a multiplicity of variables and lack of baseline data.
- Randomised controlled trials admit only a portion of the available research
- Evidence to date draws heavily on the US experience

Summary: what do we know about the effectiveness of initiatives to address maternal and child nutrition in the early years?

- Broad measures to improve income in disadvantaged households, and improve access to cheap, nutritious food, are more likely to be effective than providing information and education about nutrition
- Breastfeeding should be promoted as an integral part of a wider nutritional agenda
- There is a need to focus research on specific vulnerable groups, and to consider nutrition as part of a broader, life course issue

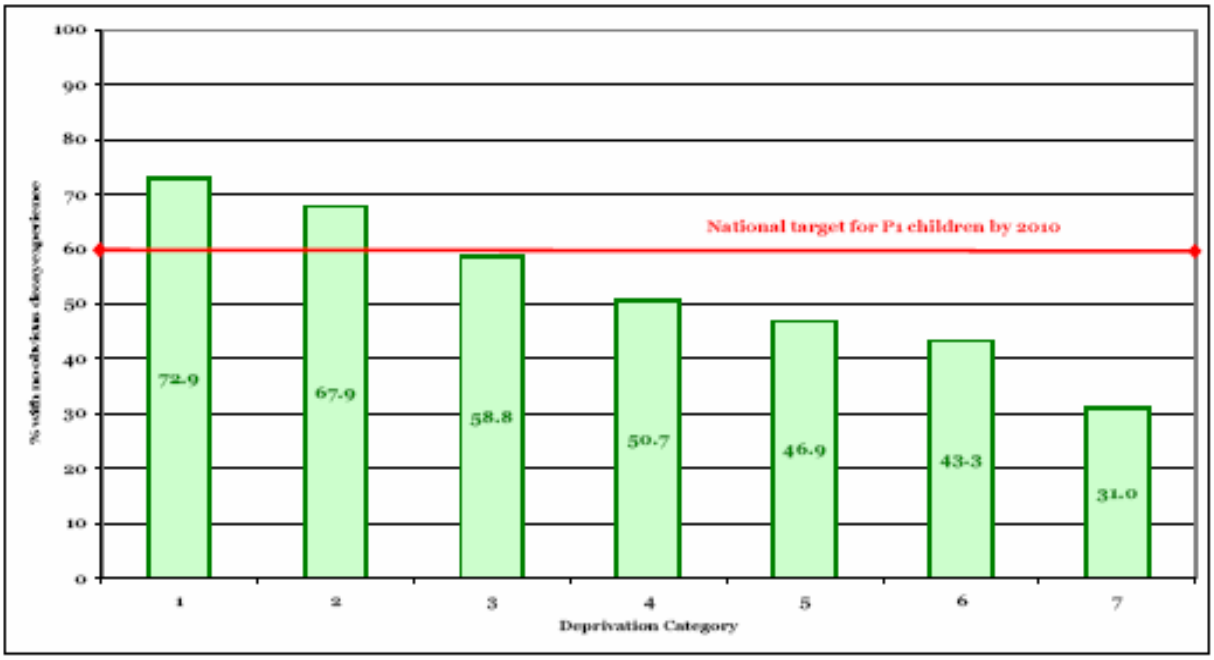
3.4 Oral and dental health

Dental decay is largely preventable and yet is the single biggest reason for children being admitted to hospital for an anaesthetic. Where sugary food and drink intake is high and frequent, dental decay begins almost as soon as the teeth come through. Infected and

abscessed teeth are regularly removed from children as young as three years (chapter seven of an unnamed document, probably published by Argyll and Clyde). By the age of 3, over 60% of children from areas of deprivation have dental disease (Scottish Executive, 2005a).

Figure 3.2 indicates the difference in dental health between Primary 1 children in the most deprived and least deprived areas. Children in the two least deprived categories have already reached Scotland 2010 National Target of 60% with no obvious decay experience, while children in the most deprived category fall well short, with only 31% with no obvious decay experience.

Figure 3.2: Proportion of Primary 1 children with no obvious dental decay experience (by deprivation category) [7]



As well as bearing the overall brunt of dental decay experience, children from more deprived areas suffer more from severe decay. In some cases, this means the provision of a general anaesthetic for dental extractions, with its attendant risks (Merrett et al, 2006).

Dietary and oral health habits established in the very early years of life influence dental and oral health into adulthood, so early action is essential.

I was unable to find any systematic reviews of the evidence on what works to promote dental health but, clearly, steps to raise awareness and understanding about nutrition more generally will be relevant.

Provision of free toothbrushes and toothpaste, free dental checks, promotion of information about healthier snacks and about the relationship between sugary foods and tooth decay are all useful interventions (NHS Health Scotland recently launched a new DVD for parents on how to care for their children's teeth). However, each is unlikely to be effective in isolation and, if the key principle of meeting the oral health needs of those in the most disadvantaged circumstances (Scottish Executive, 2005a) is to be met, it is important to acknowledge that

[7] National Dental Inspection Programme of Scotland, 2006

the most disadvantaged families are the least likely to engage with relevant public health messages.

Evidence from Scotland: Childsmile (West) 2006
Childsmile (West) is a 3-year demonstration programme designed to improve the oral health of young children within identified deprived communities in Greater Glasgow and Clyde, Lanarkshire and Ayrshire and Arran.

Childsmile is the name given to link all the oral health improvement programmes. The three main components of the comprehensive programme are:

- pre school health promotion and tooth brushing programmes in nurseries and schools
- demonstration programme West - prevention from birth
- demonstration programme East - nursery and school preventive programme

The Childsmile (West) programme will be evaluated over the 3 years and using the concept of action research will develop best practice. Building on the experience from this initial project will inform the development of the programme across the rest of Scotland.

The overarching aim of Childsmile (West) is to prevent oral disease from birth and to introduce preventive measures targeted at those at greatest risk of oral disease. Evidence based early intervention before the disease appears is the core concept. If successful, such programmes could significantly reduce disease levels in targeted groups of children in Scotland and ensure that Scotland achieves the target set for the year 2010: that 60% of 5 yr olds will have no obvious signs of dental decay.

Summary: what do we know about what works to promote oral and dental health?
- There does not appear to be a coordinated evidence base on the topic, but it is likely that a combination of approaches (including information, education, promotion of healthy eating options, practical support and free dental checks) will be most effective in reducing dental decay in young children
- *Childsmile (West),* which operates in several areas of Scotland and targets children at risk of tooth decay from the earliest stages of infancy, is a promising initiative which will be evaluated during its 3 year pilot period

3.5 Accidents and injuries

The association between socio-economic status and child mortality due to road-related accidents has been well established, and a relationship between social deprivation and non-fatal road injuries has also been identified. Although this section relates to school age children as well as those in the first two years of life, this chapter seemed to be the most appropriate place to include it. This section summarises Asthana and Halliday, 2006, who include a range of references to support each of these findings. A combination of factors appears to put children from deprived backgrounds at greater risk, including:

- *neighbourhood characteristics*: urban deprived areas tend to have higher volumes of traffic than more affluent areas, increasing exposure to risk

- *housing design*: living in a home with insufficient space to play, or in housing that opens directly onto the street also increases the risk of child pedestrian accidents
- *family circumstances*: poorer children are more likely to walk to school and less likely to be accompanied on the journey, or supervised crossing roads, than children from more affluent backgrounds
- *individual behavioural and emotional factors* children with hyperactivity appear to be at increased risk of accidents involving moving vehicles

In addition to road traffic accidents, over a million UK children under the age of 15 are injured every year within the home. The under fives are most at risk (accounting for 71% of all deaths and 60% of hospitalisations from home accidents in 1999. The relationship between deprivation status and home injuries in children is pronounced across a range of categories, including falls, burns/scalds and poisoning. The mechanisms by which disadvantage increases risk of home accidents are not well understood, but the following have been suggested as contributory factors (sources noted in Asthana and Halliday, 2006):

- *parental knowledge:* for example, the potential for accidents; effective safety measures
- *parental behaviour:* for example, drug and alcohol misuse, smoking
- *parental circumstances:* such as insufficient income to purchase and maintain home safety equipment

3.5.1 What works to improve the safety of young children on the road and at home? (Asthana and Halliday, 2006)

- There is evidence that single issue campaigns can be effective, particularly those focusing on safety equipment (such as child-resistant packaging and smoke detectors)
- Evidence supports environmental modification (such as alterations to the road system and physical barriers to road injury – e.g. window bars, cycle helmets and mouth guards)
- Area-wide engineering schemes and traffic calming measures are effective, relatively low cost and, while focusing on the most vulnerable groups, are effective for people of all ages and circumstances
- Such schemes also have the (often unmeasured) potential to increase cycling and walking at the neighbourhood level, together with the potential for children to play outdoors, with benefits for both health and environment
- There is evidence that improvements to playground design can reduce the frequency and severity of injuries
- Home visiting programmes can substantially reduce rates of accidental injury, particularly in families at high risk, although no review of the evidence has been able to establish which components of the programme were effective in reducing childhood injury in the home
- Educational programmes alone appear to have little effect, irrespective of the form they take (including skills training, mass media exposure and targeted education courses) or the focus (such as road safety or parental awareness of the risks from drowning in the home)
- However, interventions incorporating legislation, education, safety equipment and environmental modification are the most likely to yield positive results

3.5.2 Limitations to the evidence base

- The evidence base is dominated by literature from the US and too few details are often given to establish exactly what works, for whom, in what context
- There is a lack of focus on deprived areas and deprived groups
- Research linking problem behaviour and accidents suggests measures targeted at high-risk children need to move beyond knowledge and skills to challenge the attitudes and habits that underlie many risky behaviours

Summary: what do we know about what works to prevent accidents and injuries to young children?

- Single issue campaigns can be effective
- Basic modifications to the environment (e.g. playground design) can reduce the severity and frequency of accidents
- Relatively low cost initiatives to improve road safety can be effective and benefit the whole community, in addition to those who are particularly vulnerable. Benefits can also include improvements to health and the environment
- Home visiting programmes can reduce rates of child injury in the home, although it is not clear which components of programmes are effective
- Educational programmes alone have little effect
- Interventions that address issues via a range of modes are the most likely to be successful
- The evidence base is dominated by literature from the US and, in general, reports do not provide adequate information to indicate whether findings might be transferable to Scotland
- Measures targeted at high-risk children need to challenge the attitudes and habits that underlie many risky behaviours

CHAPTER FOUR BIRTH ONWARDS – HOME VISITING PROGRAMMES

4.1 Introduction

Health professionals such as midwives and health visitors have been using home visiting over a century. Health visiting is a universal service provided to children and families from a few days after birth. It has undergone major changes in recent times as the service has moved from a solely medical model towards a holistic approach, with an emphasis on health promotion, prevention and intervention for children at risk. Social services and voluntary services also have an established history of providing flexible services within the home.

Home visiting has been identified as an important intervention for tackling health inequalities from an intergenerational perspective, and is capable of producing improvements in parenting, child behavioural problems, cognitive developments in high-risk groups, a reduction in accidental injuries to children and improved detection and management of postnatal depression (Bull et al, 2004). However, there is also a significant problem of non-use, meaning that many families fall through the statutory-voluntary sector gap (Oakley et al, 1998) and not all evaluations are positive.

Sutton et al (2004) report that a number of studies in the UK have shown that the provision of individual, home-based support, conducted weekly over the first few months after birth, and typically totalling around 8-10 sessions, is effective in speeding up the mother's recovery from post-natal depression. It appears that this kind of support can be just as effective when delivered by trained health visitors as by experienced psychotherapists (Cooper and Murray, 2003), making it a practicable intervention. One trial showed the provision of such psychological support to be as effective, in the majority of cases, as antidepressant medication (Appleby et al, 1997). Moreover, the provision of psychological support appeared to be highly acceptable to the mothers concerned. It is not known whether initiatives specifically targeted mothers in low socio-economic groups, or whether outcomes were better or worse for women in these groups.

Home visitation programmes targeting high risk families have also been found to be effective in reducing antisocial outcomes for children. Most involve a multi-dimensional approach. The Elmira Prenatal/Early Infancy Project (PEIP; Olds et al, 1997), for example, provided parent education and enhanced family support and access to services via nurse home visits for the first two years of the child's life. Outcomes included reduced neglect and abuse, and fewer arrests of children by the age of 15 years (see Nurse-Family Partnership, Chapter Two, section 2.5. Elmira was one of the three sites where the programme was evaluated).

Programmes which use trained volunteers, rather than professionals, to provide home based support to vulnerable mothers have shown promise when evaluated, and have the additional advantages of being acceptable to families and benefiting families, the volunteers themselves and the wider community (Barker et al, 1992). However, as discussed in Chapter Two, using paraprofessionals in the Nurse-Family Partnership programme was not so promising.

The evidence summarised above includes a number of different approaches. This chapter will attempt to investigate the individual models operating in Scotland and elsewhere to highlight the known strengths and weaknesses of each approach.

The Scottish Government currently funds a range of projects which promote positive parenting skills and support to parents. Evidence relating to the following major initiatives is considered below:

- Sure Start Scotland
- Starting Well (and Parents and Children Together)
- Home-Start
- Child Development Programme and Community Mothers Programme

4.2 Sure Start Scotland

4.2.1 Introduction to Sure Start

Sure Start is a UK Government programme which aims to deliver the best start in life for every child. A review of services for young children, carried out 1997-98 (http://www.archive.official-documents.co.uk/document/cm40/4011/401122.htm) concluded that there was no single blueprint for the ideal set of effective early interventions, but that they should share the following characteristics:

- two generational: involve parents as well as children
- non-stigmatising: avoid labelling 'problem families'
- multifaceted: target a number of factors, not just (e.g.) education or health or 'parenting'
- locally driven: based on consultation and involvement of parents and local communities
- culturally appropriate and sensitive to the needs of children and parents

Accordingly, Sure Start was developed in 1999 to bring together early education, childcare, health and family support, with an emphasis on outreach and community development. Sure Start covers a wide range of programmes, both universal and those targeted on particular local areas. In England, where national and local evaluations have taken place, local programmes are concentrated in neighbourhoods where a high proportion of children are living in poverty, although programmes are not necessarily targeted at families experiencing disadvantage. Rather than providing a specific service, the Sure Start initiative represents an effort to change existing services by 'reshaping, enhancing, adding value an by increasing co-ordination' (http://www.ness.bbk.ac.uk/documents/Methodology.pdf).

Although services are designed to meet the needs of families with children under four within each catchment area, and offered to those families first, many of the services developed are available to those living outside the catchment areas. Local authorities are responsible for Sure Start settings and children's centres, and the services on offer may vary from area to area.

Sure Start Scotland is the main programme in Scotland which supports vulnerable families with very young children. The programme brings together early education, childcare, health and family support, with an emphasis on outreach and community development. The broad objectives of the initiative are to:

- improve children's social and emotional development
- improve children's health
- improve children's ability to learn

- strengthen families and communities

The initiative represents an effort to change, expand and enhance existing services, rather than providing a specific service. Funding has been allocated to local authorities to spend on Sure Start Scotland since 1999, distributed on a weighted basis to reflect population, deprivation and rurality. The target is for 15,000 vulnerable children aged 0-3 to receive an integrated package of care involving a range of services.

A programme of evaluation activity has been carried out in relation to Sure Start in England (see below) but in Scotland there has been less research to date. However, two mapping exercises have been carried out and findings from these are reported here.

4.2.2 First Sure Start Scotland mapping exercise, carried out 2001

This exercise used information supplied to the Scottish Government by local authorities, summaries of Sure Start Scotland spending, service provision and service use. Information was also collected about systems for monitoring and evaluating services.

Service providers recognised the need for monitoring and evaluation, although not all claimed this was being done in relation to their own service. Guidance on how services were to be measured would have been appreciated at the outset, along with the specific evaluation criteria to be used.

The following benefits of Sure Start funding were acknowledged:

- Capacity building – investment in staff training and development
- Building of new and extended premises
- Developments may not have increased the number of children attending centres, but have improved the children's environment and quality of daily experience
- Additional staffing ratios have allowed more preventive and developmental work to be done
- Staff have been given the capacity and support to work with harder to reach families
- The benefits of recruiting local people as volunteers for services may be seen in increased self-confidence, improved quality of parent-child relationships and the adoption of training and employment opportunities which might previously not have been taken.

Weblink to final report:
http://www.scotland.gov.uk/Resource/Doc/46922/0024036.pdf

4.2.3 Second Sure Start Scotland mapping exercise, carried out 2004-05

The exercise aimed to assess the impact of Sure Start Scotland services and funding on children and families, as well as updating the quantitative data obtained from local authorities in 2001. Data were collected via a range of quantitative and qualitative methods.

Five thousand and seventy five children were found to be in receipt of an integrated package of care, but numerical information was only received from 7 out of 32 local authorities, and it was not clear that all children being supported were necessarily from disadvantaged families.

The Scottish Executive target of 15,000 vulnerable children receiving an integrated package of care may have been met, but this is not known for certain, as less than a third of returns had data on this. Sure Start Services were found to be reaching pre-birth services as well as children in the 0-3 age group.

Key findings relating to Sure Start Scotland services:

- Sure Start contributes to extending and enhancing services rather than replacing existing services with new services
- Services for which data were collected were meeting the range of Sure Start Scotland objectives. Fewer claimed to be meeting the objective 'to improve children's health' although data suggest that it is in the area of health that some of the most innovative developments were taking place
- Improvements in joint working between professional groups (health, social work and education) although progress still needs to be made on this
- Services aiming to serve the hardest to reach groups reported success (individual examples are noted in the report)
- Some services had formal evaluations in place and the majority of local authorities carried out formal consultations
- Impacts of services related to improved child behaviour and development, increased self-esteem of the parent, preventing more intensive social work involvement as well improving health. Evidence from the case examples showed the impact of single, short term interventions as well as longer term, integrated interventions

Areas of concern highlighted re Sure Start Scotland:

- Demand for services outweighs supply
- Expectations may be raised that cannot be delivered in terms of support beyond age 3 and, in particular, across the transition to primary school
- Balancing needs of highest priority families with preventative work with other vulnerable families
- Services need to be well coordinated to ensure that support does not become intrusive

The mapping exercise made a number of recommendations, including:

- the further development and expansion of Sure Start in order to provide adequate support to vulnerable families
- assessment of longer term impacts, especially at key transition points (e.g. into nursery or primary school)
- issues of rurality need to be addressed, especially in relation to transport needs and reach of services
- review, and development, of arrangements for monitoring and evaluation.

Weblink to final report:
http://www.scottishexecutive.gov.uk/Resource/Doc/47121/0020894.pdf

4.3 Sure Start in England

A comprehensive programme of evaluation activities has been in progress in relation to Sure Start in England for several years and many of the findings are likely to be transferable to Scotland. The overall evaluation of Sure Start in England focused on three core questions:

- Do existing services change?
- Are delivered services improved?
- Do children, families and communities benefit?

If changes/improvements/benefits were found to occur, the evaluation would assess how they happened, for which populations and under what conditions.

A number of reports from the evaluation have been published. The following are the most recent and appear to be the most important.

4.3.1 Early impacts of Sure Start Local Programmes on Children and Families (published 2005)

Sure Start Local Programmes (SSLPs) do not have a prescribed 'curriculum' or set of services. However, SSLPs were advised that services should be 'evidence-based' and were directed to sources of information on evidence-based interventions. A great diversity of interventions has been employed in SSLPs, and this poses challenges to evaluating their impact.

As a first step in assessing the impact of SSLPs on child and family functioning, the cross-sectional phase of the Impact Study of the National Evaluation of Sure Start (NESS) gathered information on 9- and 36-month old children and their families living in SSLP areas and in comparison communities. These data were obtained after SSLPs had been in existence for at least 3 years: i.e. it was possible to pick up early indications, but too soon to draw definitive conclusions (9-month olds are to be followed up at 36 months, after exposure to SSLPs for a longer period of time).

The work set out to answer 4 key questions, listed below with summary findings:

1. Do children/families in SSLPs receive more services or experience their communities differently than children/families in comparison communities?

- There is little evidence that SSLPs have achieved the goals of increasing service use and/or usefulness, or of enhancing families' impressions of their communities. Among families with 36-month old children, mothers in SSLP areas rated their communities *less favourably* than those in comparison communities

2. Do families function differently in SSLP areas than in comparison communities?

- SSLPs seem to enhance growth-promoting family processes to some extent, though many family outcomes appear to be unaffected by SSLPs.

3. Do the effects of SSLPs extend to children themselves?

- Relatively *less disadvantaged* children/families seem to benefit, while relatively *more disadvantaged* children/families seem to be adversely affected.

4. Are some SSLPs more effective than other SSLPs?

- There is some evidence that programmes led by health agencies have certain advantages. This may be because such SSLPs have immediate access to birth records; also their health visitors, who visit every infant, are likely to be better integrated with SSLP services and can direct needy families to relevant SSLP services.

In the short term, the intervention appears to have produced greater benefits for the moderately disadvantaged than for the more severely disadvantaged. It is suggested in the paper that the utilisation of services by those with greater human capital left others with less access to services than would have been the case if they had ***not*** lived in SSLP areas. Special efforts may need to be made to ensure that those most in need are not inadvertently deprived of assistance, due to the way in which SSLPs operate. Less disadvantaged families are likely to find it easier to access services and information about services, whereas the most disadvantaged families remain, at least in the shorter term, harder to reach and to engage.

Weblink to report: http://www.ness.bbk.ac.uk/documents/activities/impact/1183.pdf

4.3.2 Variation in Sure Start Local Programmes' Effectiveness: Early Preliminary Findings (published 2005)

SSLPs differ from other interventions undertaken to enhance the life prospects of young children in that they are area based, with all children and their families living in a prescribed area serving as the 'targets' of intervention. This has the advantage that services within a SSLP area are universally available, thus avoiding any stigma that could result from the targeting of individuals. However, as noted above, it may also mean that families in greatest need are not accessing or engaging with services.

The Programme Variability Study (PVS) considered links between aspects of SSLP implementation and the level of effectiveness on child and parenting outcomes for the SSLPs included in the Impact Study. The PVS study developed ratings of 18 dimensions of implementation relating to:

- what was implemented (e.g. service quantity, identification of users, reach strategies)
- the processes underpinning proficient implementation of services (e.g. partnership functioning, leadership, staff turnover)
- holistic aspects of implementation (vision, communications, empowerment, ethos)

SSLPs tended to score consistently across the three domains, indicating that proficiency in one domain usually goes with proficiency in other domains. Results indicated that these 18 dimensions are able to collectively differentiate between the most and least effective SSLPs on parenting and child outcomes, and that the proficiency with which the *whole model* is implemented has a direct bearing on effectiveness.

The study was more successful in relating aspects of SSLPs to improvement of *parenting* than to improvement of *child* outcomes.

Where programmes scored highly on 'identification of users,' 3 year old children's scores for non-verbal ability tended to be better in the programme catchment area. This finding is likely to be relevant to identifying and supporting the most vulnerable and hard-to-reach members of the community.

There are indications that improved child-focussed services and a higher proportion of health-related staff in SSLP areas are both independently associated with higher maternal acceptance.

The paper suggests that findings indicate a link between the *processes* by which SSLPs were implemented and the *variation in child and parenting outcomes*. Where SSLPs are implementing their programme in a manner that reflects the basic principles of the Sure Start initiative, they are more likely to achieve better outcomes for both parents and children.

Weblink to report: http://www.ness.bbk.ac.uk/documents/activities/impact/1184.pdf

4.3.3 Understanding variations in effectiveness among Sure Start Local Programmes: Lessons for Sure Start Children's Centres (Anning et al, 2007)

The study aimed to investigate:

- Why some SSLPs were more effective than others
- To characterise and explain variations between high, medium and low levels of programme proficiency in the delivery of services
- To characterise and give examples of proficient and effective services for families with young children in programmes which were becoming Sure Start children's centres

Evidence was collected from 150 SSLPs. 18 dimensions were used, as in the earlier work, described above. Unlike the earlier work, this was a longitudinal study, looking at child and parent outcomes when the children were aged 9 months and 3 years.

Main findings:

- Programmes that scored well across all 18 dimensions of proficiency showed better results in some parenting outcomes and, to a lesser extent, in child development outcomes
- High scores in empowering users and providers of services were related to:
    - Higher levels of maternal acceptance when child was 9 months old
    - A more stimulating home learning environment when the child was aged 3
- A stronger ethos and better overall scores on the 18 dimensions were related to higher levels of maternal acceptance for families with 3 year olds
- Better identification of users by programmes was related to higher non-verbal ability in 3 year olds
- Having a greater number of *inherited* parent-focused services was related to less negative parenting
- Having a greater number of improved child focused services was related to higher maternal acceptance
- Having a greater proportion of staff that was health related was associated with higher maternal acceptance
- Reach figures were disappointing. Those who used services often used several, and reported satisfaction. But services offered at traditional times and in conventional formats did not reach many fathers, BME families, working parents. Providers found barriers to attracting 'hard to reach' families difficult to overcome
- Few programmes demonstrated proficiency in systematically monitoring, analysing and responding to patterns of service use or rigour in measuring the impact of treatments
- Multi-agency teamwork, including effective ways of sharing information, and clarity about the cost effectiveness of deploying specialist and generalist workers strategically, proved difficult to manage and operate.

Weblink to summary report:
http://www.ness.bbk.ac.uk/documents/activities/impact/10.pdf

4.3.4 Cost-effectiveness in Sure Start Local Programmes: a synthesis of local evaluation findings (no publication date, references go up to 2006)

SSLPs were required to undertake local evaluation examining the process of service delivery and impacts and outcomes that have resulted from their activities. This report acknowledges the difficulties of assessing cost-effectiveness, and the impossibility of making comparisons when costs data are not always accurate, presentation of the calculations made not transparent and expertise on the part of the analysts not always reliable. However, the requirement to calculate the unit costs of services was alleged to be helpful and some services managed to restructure their arrangements in order to reduce costs. The main messages from the report focus on spend:

- It takes time for SSLPs to develop and it is not until the third financial year of operation that most SSLPs are spending allocated funds an extent indicating widespread effects on services
- Health-led SSLPs appear to get services up and running sooner, as indicated by their quicker rate of spend.

Weblink to report: http://www.ness.bbk.ac.uk/documents/synthesisReports/1287.pdf

Summary: what do we know about the effectiveness of Sure Start Scotland?

- The impact of Sure Start has yet to be evaluated in Scotland, but a mapping exercise carried out in 2004/05 found that some Sure Start services had formal evaluations in place and the majority of local authorities carried out formal consultations. Benefits of Sure Start funding include:
  - capacity building (in terms of staff and premises) has helped staff to work with harder to reach families as well as improving service quality
  - recruitment of local people as volunteers for services
  - improvements in joint working between professional groups
  - services aiming to serve the hardest to reach groups reported some success (self report only)
  - improved child behaviour and development and increased self-esteem of the parent
- The following concerns have been raised:
  - demand for Sure Start services outweighs supply
  - how to ensure provision of support beyond age three?
  - how to balance the needs of the highest priority families with preventative work with other vulnerable families
  - support may become intrusive
- In England, a programme of evaluation has found that, where Sure Start is implemented as intended, there is some evidence of effectiveness, but that it is too early to see the expected long-term benefits. To date, the initiative has experienced difficulties reaching and engaging the most disadvantaged families.

4.4 Starting Well

Starting Well began in 2000 as a national health demonstration project serving as a 'test-bed' for innovative practice. It aimed to demonstrate that child health in Glasgow could be improved by a programme of activities that supported families and provided them with access to enhanced community-based resources. There is no indication of how/if work was integrated with Sure Start.

4.4.1 Phase One

Phase One (2002-04) focused on intensive home-visiting support to all families with new-born babies in two communities in Glasgow. This was implemented through health visitor-led skill mix teams. Areas were selected on the basis of a range of criteria:

- levels of socio-economic deprivation
- cultural mix
- evidence of significant child health and parental support needs
- presence of appropriate organisational community infrastructures

There were two essential components in the project: intensive home-based support and the provision of a strengthened network of community-based services for children and their families.

The project provided this intensive home visiting service as standard provision for families with a newborn baby. The level and type of support offered was based on a comprehensive assessment of family need. The project also aimed to develop enhanced local community supports and structures within these areas and to develop integrated organisational services to respond to the needs of children and their families both within the local areas and across Glasgow as a whole.

4.4.2 Independent evaluation of Starting Well

An independent evaluation of Phase One reported in June 2004 (Mackenzie et al, 2004). The evaluation aimed to assess impact by comparing the two intervention areas with socio-demographically similar areas in the north of the city. It compared the health and development of intervention children over the first 18 months of life with a group of families receiving statutory health visiting. The evaluation aimed to assess each child on 3 occasions (at birth, at six months, at 18 months).

The evaluation investigated 3 key process issues:

- extent to which intensive home visiting led to the development of therapeutic relationships between families and their home visitors
- implementation issues involved in developing a skill mix approach to home visiting
- degree to which intensive home visiting at an individual family level led to improved community and strategic responses to child and family health problems

Findings were complex and difficult to interpret, but indicated that more time and direct contact with mothers encouraged the formation of trust, an individualised care package and

the provision of better quality information on needs and life circumstances. Variation in process and outcomes was explained by mothers' receptivity to the service and health visitor caseload pressures.

Mothers in the intervention group were more satisfied with levels of health visitor support at both 6 month and 18 month assessments and were also less likely to be at risk of postnatal depression at 6 months (though not at 18 months). More 'Starting Well' children were registered with a dentist at 6 and 18 months.

The project teams developed very differently in the two intervention areas and differed in the degree to which they advocated integration within GP practices and in the dilution of the 'Starting Well' approach. Although much good practice was identified in bringing together health visitors and nursery nurses, issues of role clarity caused problems. The employment of health support workers through a voluntary organisation allowed a supportive model of engaging individuals with knowledge of the local area, who might not previously have been engaged in the labour market. However, the dual management structure led to difficulties around the day to day deployment and supervision of health support workers.

Findings indicated that intensive contact with families, better communication within the project teams and working with other agencies helped health visitors to understand health needs at a community level, although the process of sharing perceptions of community level need was haphazard. Increased burden on health visitor caseloads and early lack of clarity about roles led to less emphasis on advocating for community change.

Weblink to full evaluation report:
http://www.scotland.gov.uk/Resource/Doc/37432/0009543.pdf

After Phase One a series of roadshow events was held across Scotland (spring and summer 2004). Key themes arising included the following:

- Interagency and partnership working should be improved, to include joint training and pooling of resources
- There was support for the model of skill mix adopted within Phase One (innovative roles assigned to Health Support Workers and Community Nursery Nurses). It was felt that including professionals from social work and education would have been helpful
- Interest and support was expressed for the use of a comprehensive and evidence-based parenting programme, but there was not universal agreement on the most appropriate programme to use
- Establishing relationships and conducting assessments during the antenatal period was felt to have received inadequate attention to date
- Strong support was expressed for health visitors working within a defined geographical patch, rather than being attached to specific GP surgeries. However, it was felt that GPs would be resistant to this way of working.

Weblink to report: http://www.healthscotland.com/documents/1205.aspx

4.4.3 Phase Two

In Phase Two (2005-06) the universal service provided in the two geographic areas moved to a targeted approach to those most likely to gain from the interventions..

During this period the project aimed to demonstrate that the wellbeing of vulnerable and disadvantaged children (aged 0-5) and their families could be enhanced through an integrated, multi-disciplinary and multi-agency approach to the provision of care. This involved creating multi-agency teams across Glasgow to provide short-term, intensive support for highly vulnerable children.

Weblink to Phase Two plan:
http://www.scotland.gov.uk/Resource/Doc/54357/0012598.pdf

A team of researchers from the University of Strathclyde Graduate Business School was contracted by Starting Well to evaluate Phase Two. They focused on the development of the integrated team approach and the input of change management support in this process. The evaluation was significantly delayed due to problems in gaining ethical approval and with the implementation of new teams. As a result the initial evaluation plan was only partially delivered. A report on the change management issues for the multi-agency teams tasked to deliver care to vulnerable families in Glasgow was expected to be published NHS Health Scotland at about the same time that this paper was completed (January 2008).

4.4.4 Parents and Children Together (PACT)

The approach developed under Starting Well has now been devolved across Glasgow in the form of Parents and Children Together (PACT) teams. Teams include colleagues from Health and Social Work Services. The seven teams are co-located within either community premises or within local authority buildings (one team is co-located with Jeely Piece Nursery[8].

The most vulnerable families are targeted through a multi-agency referral process. The family should be keen to address parenting support issues which require interagency input, and are required to engage fully with PACT. The multi-disciplinary approach allows for a range of interventions to meet a variety of child and parental needs. For example:

- Individual work with parents and children to increase self-esteem, reduce isolation, promote play and development etc
- Parenting work (individually and/or in groups)
- Practical support (such as money advice, advocacy, accessing relevant services and supports)
- Group work (such as women specific and men specific groups focusing on building confidence, social skills etc)

The timeframe for completion of the intervention includes a 4-week period of integrated assessment and initial support by the team, following by a planning meeting with agencies involved in supporting the family. This is followed by a 12 week planned intervention. After a final review meeting, the family and services determine whether further support is required.

[8] *The Jeely Piece project* runs in a child centre in Castlemilk, Glasgow and offers day-care where each parent regularly takes a turn helping with the childcare and works alongside the staff. This provides an opportunity to demonstrate and teach parenting. The project also runs positive parenting classes. However, there is no indication that the Jeely Piece has been evaluated.

There is currently no evaluation data relating to PACT in Glasgow, but a case study has been produced [by NHS Health Scotland? – not sure when to be published] to draw out general lessons in managing change and providing a resource for managers involved in planning and implementing complex change.

Learning is being shared across Scotland through the Early Years Learning Network at NHS Health Scotland.

4.4.5 Other reports on Starting Well

Since the project ended in March 2006, there has been extensive analysis of the database that was used in Phase One by the 'Starting Well' staff team. The Starting Well project Phase One Database Analysis – Family Characteristics and Health Visitor Targeting, A Briefing Paper' was published in January 2007 by the PEACH Unit, Glasgow University. Eight risk factors were identified as predictors of contact rates:

- most deprived decile (Scottish Index of Multiple Deprivation)
- South Asian
- multiple birth
- premature (<37 weeks)
- family unwaged
- mother or father in care as child
- high score on Edinburgh Postnatal Depression Scale
- involvement with Social Work Services or criminal justice.

Weblink to briefing paper:
http://157.203.43.151/uploads/documents/3496-SW%20Database%20analysis.pdf

Further analysis has been completed by Julie Chambers through the PEACH unit and was awaiting publication by NHS Health Scotland at the time this document was completed (February 2008).

There is a wide range of reports on both phases of Starting Well, including an evaluation of the project's use of the parenting education programme Triple P, that can be accessed on: http://www.healthscotland.com/resources/networks/early-years.aspx (for more information about the evaluation of the Triple P parenting programme, see Chapter Five).

Summary: what do we know about the effectiveness of Starting Well?

- An independent evaluation of Phase One reported in 2004.
- Findings are difficult to interpret, not least because Starting Well was implemented differently in the two intervention sites, and the approach was diluted to various extents
- The intensive visiting programme encouraged mothers to trust services
- Better quality information on needs and life circumstances helped in putting together individualised care packages
- Variations in process and outcomes depended on the receptivity of mothers to the service and health visitor caseload pressures.
- The intervention changed from a universal to a targeted approach within the pilot areas between Phase 1 and Phase 2.
- Phase 2 information is not yet available

4.5 The Child Development Programme and Community Mothers Programme

Developed in Bristol in the 1980s, the ***Child Development Programme*** (CDP) is used in Britain, the Netherlands and Australia. (A version of the programme, the Comprehensive Child Development Program, is used and has been evaluated in the US, but it is not clear how/whether this differs from the version operating elsewhere in the world.)

The programme offers monthly visits to first time parents by specially trained health visitors, starting antenatally and continuing for the first year of the child's life. Visits are made every four-five weeks and are of 40-60 minutes duration. The programme focuses on six areas: health, language, cognition, socialisation, nutrition and early education. The focus is on developing the potential of the parents, rather than making them dependent on the health visitor. Emphasis is placed on the health and wellbeing of the mother, as a woman with her own needs and interests. The programme also aims to enhance the role of fathers/partners, by building on their existing strengths and giving them a sense of control over their lives and their children's upbringing. A significant factor in this programme is the exploration of issues such as health, development, diet and self-esteem in relation to both children and parents.

Twenty six areas of Britain are covered by the programme, including at least one in Scotland (Lanarkshire).

Evaluation of the initial phase of the programme in the UK (Barker, 1994) concluded that three main factors were attributable to its success:

- Strong emphasis on the parents learning to take control over the health and development of their children
- Fostering of parental skills through the use of programme strategies
- Joint working out, by parents and health visitors, of objectives for the next month's parenting activities

It was not possible to asses whether individual aspects were less successful, or whether the programme worked better for less disadvantaged parents. The author is (or was) also the Director of the Child Development Programme in Bristol, so the objectivity of the evaluation might be questioned (see also the study below).

A detailed study of statistical data, across a sample of more than 30,000 children in 24 health authorities, trusts and boards in England and Wales suggested that those families involved in the CDP have a 41% lower rate of registration on the Child Protection Register, and a 50% lower rate of physical abuse, than adjusted levels for the relevant populations in the same health authorities. The authors emphasised that the success of the intervention comes about because parents have been supported to become better parents and, if the programme should be targeted at specific families, they would be likely to recognise this and refuse the intervention (Barker et al, 1992).

An evaluation which followed 4,000 families across a five year period (Goodson et al, 2000) found no significant difference in either child outcomes or parent outcomes between the intervention and control families. (This evaluation appears to relate to the US intervention only.) However, the evaluation has been criticised for shortcomings in implementation and

on methodological grounds, including the reliability of comparison data, poor randomisation and low participation rates (Gilliam et al, 2000).

The First Parent Visitor Programme (FPVP) evolved from the CDP and comprises a programme of regular home visits by a specially trained health visitor to first-time parents from deprived areas. The mother is visited once antenatally, at the statutory primary birth visit, three weeks postnatally and then every five weeks until the eighth postnatal month (although some families experiencing ongoing difficulties continue to receive the service until the child is two years old). The effectiveness of the programme has been evaluated in the UK using prospective and retrospective data from areas receiving the FPVP and matched comparison sites and a sample of over 2000 families. Findings indicated that:

- There were no differences between the groups of mothers in self esteem, locus of control or depression rates
- Women who received the FPVP were more likely to have changed partners, but had a wider support network than the comparison group and consulted their GP less often
- Breast feeding rates were higher in FPVP mothers, who also gave their infants more fruit juice drinks than the comparison group
- No differences were apparent in developmental outcomes for children in the study and comparison groups
- There were no differences between the groups in immunisation rates, uptake of child health surveillance, or use of hospital services
- Receipt of the FPVP was associated with increased use of electric socket covers and lower accident rates in the second year of life
- A higher proportion of families who received the FPVP were registered on the local child protection register, compared with comparison families

Although some of the findings are positive, the evaluation could not show a clear advantage for the FPVP over conventional health visiting for families in deprived areas (Emond et al, 2002). It is not clear how/whether the FPVP differs from the CDP.

The ***Community Mothers Programme*** (CMP) evolved from the Child Development Programme and was launched in Dublin in 1983. Currently it appears to be used throughout Ireland and at least some parts of the UK, although the emphasis of the intervention varies slightly (in Lanark, for example, the focus seems to be entirely on supporting mothers to breastfeed their babies) and the length of time support is offered also varies between one and two years.

Recognising that some parents seek social support from other parents, rather than professionals, the programme aims to utilise experienced volunteer mothers ('community mothers') to give support to first-time and some second-time parents in rearing their children. Specifically targeted at disadvantaged areas with large numbers of births, the programme aims to develop the skills of parents of young children and build their self-esteem.

Community mothers live in the same area as the recipients and are recruited to reflect the ethos of the community they will be visiting. They are guided by a Family Development Nurse, who serves as a facilitator. The community mother receives training over a four week period before engaging with families.

Community mothers make structured visits once a month to parents in their own homes, providing empathy and information in a non-directive way to foster parenting skills and build parental self-esteem. Each community mother visits between five and 15 families.

The *community mothers'* motivation is to help their community with the knowledge and experience each has gained through childrearing. Participation in the programme helps to increase their feelings of self-worth and their status in their own community. It is claimed (in an unpublished thesis by Molloy (2005)) that volunteering in the CMP contributed to lifelong learning.

The *parents* are empowered to believe in their own capabilities and parenting skills without becoming dependent on professionals.

The programme was evaluated in Dublin, using a randomised controlled approach in 1989-90, when programme children were one year old. Both intervention (n=141) and control (n=121) groups received the standard support from their local public health nurse and invitations to attend for primary immunisations and a development assessment. Eighty-nine percent of the sample completed the study.

The programme was found to have significant beneficial effects: children in the intervention group scored better in terms of immunisation, cognitive development and nutrition, and their mothers scored better in terms of nutrition and self-esteem than those in the control group (Johnson et al, 1993). The children were then followed up seven years later (Johnson et al, 2000). Findings indicated that:

- Superior parenting skills persisted among the programme families
- Children whose mothers were in the CMP were more likely to read books, to visit the library regularly, to visit the dentist and to have better nutritional intake
- Programme mothers had higher levels of self-esteem and were more likely to express positive feelings about motherhood
- The effects also carried through to subsequent children born to mothers, who were more likely to have received immunisation and to have been breastfed

One-third of the original sample group were followed up (38 in the intervention group and 38 in the control group). It is not clear whether the smaller sample was selected (and if so, how) or whether only one third of the families could be traced. If the latter was the case, it could be argued that those who had benefited most from the programme were the most likely to agree to participate in the follow up, and therefore the full, long-term impact of the programme remains to be evaluated.

Although it is clear that levels of disadvantage were high within the communities targeted by the initiative, the authors do not state whether outcomes were better or worse for particular groups of families within the communities. There is also no mention of negative findings. However, the programme is not intensive (many of the volunteers had just twelve contact hours with each mother), it offers benefits to the volunteers and to the mothers visited (and, ultimately, to the wider community) and it *may* engage parents who are difficult to reach via traditional services.

Summary: what do we know about the effectiveness of the Child Development Programme and the Community Mothers Programme?

- Evaluation of the CDP in the UK indicated that empowering parents to take control of the health and development of their children and fostering their parenting skills are fundamental for the success of the programme
- A longitudinal study of the effectiveness of the First Parent Visitor Programme (a variant of the Child Development Programme) in the UK was unable to demonstrate an overall advantage over conventional health visiting
- Evaluation of the Comprehensive Child Development Programme in the US found that children's health, ability to concentrate and social behaviour were better, compared with those who received conventional postnatal care, and that they were more likely to have story books at home.
- A study in the Irish Republic found that visits from community mothers had beneficial effects on parenting skills and maternal self-esteem, which were sustained over time. The effects also carried through to subsequent children born to mothers, who were more likely to have received immunisation and to have been breastfed.
- In general, it is not clear from the evidence whether outcomes were better or worse for particular groups of families within the communities participating in evaluations of the CDP or CMP and, therefore, it is hard to tell whether the initiatives are effective for the most disadvantaged families
- The CMP is not a costly or intensive intervention and offers benefits to the community volunteers and, potentially, to the wider community as well as to the mothers visited

4.6 Home-Start

Home-Start is another example of a UK-based volunteer home visiting programme in which trained volunteers offer regular support, friendship and practical help to young families under stress, in their own homes. Established in 1973, it has schemes in Scotland, England, Wales and Northern Ireland. Volunteers are of all ages and backgrounds; the only criterion for inclusion is that the volunteer has had experience of being a parent.

The strategic plan for 2005-08 stated aims to expand and further develop the service to all four nations of the UK, demonstrate the effectiveness of the programme, and promote better awareness of Home-Start's services:
http://www.home-start.org.uk/about/Home-Start_Strategic_Plan_2005-2008.pdf

Evaluation of case study areas in the 1990s indicated that:

- referrers appreciated the flexible and responsive nature of the service
- mothers appreciated having someone to befriend them and listen to them as well as a source of support that was neither stigmatising nor threatening
- families valued the input of Home-Start and more than half saw an improvement in their emotional wellbeing.

However:

- involvement of fathers was minimal

- there was a tendency not to refer families where there were concerns about child protection or domestic violence
- some families were unwilling to accept the service because of perceived stigma
- 42% of referrals either did not use the service, or did so only briefly
- low users were more likely to be the most vulnerable (from socially disadvantaged backgrounds, with a history of depression, larger families and children at risk). (Case studies quoted in Asthana and Halliday, page 179).

An evaluation of the 18 Home-Start schemes operating in Scotland in1998 found that the most common reasons for referral were post-natal depression; ill health; pregnancy or new born baby; isolation; children's behaviour. The most common activities undertaken by volunteers were talking/listening; outings; playing with children; respite; shopping. In most cases, responses showed a reduction in loneliness and increase in confidence. General health improvements were reported by 40% of respondents and reduction in depression by 38%; in 21% of cases, anti-depressant medication ceased altogether. Volunteers were valued as undemanding friends who helped in facing 'authority figures.' In 53% of cases, volunteers had accompanied families to appointments, giving them practical support and encouragement.

However, the evaluation appeared to rely entirely on a survey of families, coordinators and referrers so, presumably, the changes in health status were self-reported rather than measured by validated instruments.

Weblink to news of evaluation: http://www.researchweb.org.uk/rip/ripnov.pdf

4.6.1 The outcomes and costs of Home-Start support for young families under stress (McAuley et al, 2004)

More recently a study evaluated the outcomes and costs of Home-Start support to 80 young families under stress, compared with 82 similar families who did not receive this kind of support. Families in Northern Ireland and South England were included in the study, although it is not clear whether the intervention and control groups came from across the two locations.

Main findings:

- The majority of mothers from both groups were experiencing a high level of parenting stress at the outset, and high levels of depressive symptoms. Problems with the social and emotional development of their children were also evident. The mothers had little available informal support and contact with mental health services, hospital accident and emergency departments and GPs was high for both groups
- Home-Start volunteers offered a combination of emotional support, practical assistance and help with outings. Mothers in the intervention group valued the service and considered that it had made a positive difference to their lives
- At the 11 month follow up, mothers in both groups exhibited fewer depressive symptoms, had improved in wellbeing and were experiencing less parenting stress. However, this appeared to be due to changes over time and to experience. For example, mothers had gained confidence as parents, had established routines to manage competing demands and regained control over their lives. Some had returned to work, thus

improving their financial situation, and the children were older and more independent (often attending playgroups or schools) so the mothers had more respite

- The results did not support the view that Home-Start had made a significant difference to the mothers over the period of the research, relative to the experiences of the families in the comparison group.
- At follow-up, there were no significant differences in formal service costs between the study and comparison groups. However, the receipt of Home-Start services pushed costs for the study group to a higher level relative to the comparison group.
- Combined with outcome results, the evidence did not point to a cost-effectiveness advantage of Home-Start.

The researchers pointed out that the benefits of a community-based initiative such as Home-Start, which does not aim to provide a structured, intensive programme, might only be apparent after a number of years. They suggested that a follow-up several years later might prove valuable. However, since mothers in both the study and comparison groups showed similar levels of improvement at the 11 month follow up period, it would be difficult to attribute subsequent outcomes to the Home-Start intervention.

Weblink to report: http://www.jrf.org.uk/bookshop//eBooks/1859352189.pdf

Summary: what do we know about the effectiveness of Home-Start?

- There is little information about the effectiveness of the intervention in Scotland – an evaluation of the 18 schemes operating in 1998 appears to have relied on survey information and self-reported health improvements
- The volunteers who delivered the scheme were valued as friends who offered practical support
- An evaluation of the costs and outcomes of Home-Start support in Northern Ireland and the south of England found that mothers valued the service, exhibited fewer depressive symptoms at follow-up and were experiencing less parenting stress. However, much of the change appeared to be due to the passage of time and greater experience of parenthood. At follow-up, there were no significant differences in formal service costs between the study and comparison groups, although the receipt of Home-Start services pushed costs for the study group higher than costs for the comparison group.
- The researchers who carried out the costs and outcomes study suggested that the benefits of a community-based initiative, which does not aim to provide a structured, intensive programme, might only be apparent after a number of years

CHAPTER FIVE PARENTING EDUCATION AND SUPPORT – EARLY YEARS

5.1 Introduction

'Parenting support' is a wide term. What may be supportive to one parent may not be supportive to the next and, within any society, parents are starting off from different places, and will encounter different sets of circumstances that will help or hinder them as they progress through the parenting life course. An additional problem, as noted by Moran et al (2004), is that, while most parenting support initiatives concentrate on parents' knowledge, perceptions of parenthood and their relationship with their child and partner, few are able to tackle directly the background to many parenting problems, such as poor housing, poverty, inadequate education, lack of community integration.

5.2 Child outcomes: emotional and behavioural development

Most of the literature concerning the ways in which parents can be supported in changing emotional and behavioural outcomes for their children focuses on their role in reducing non-compliant or antisocial behaviour (Moran et al, 2004). The early manifestation of behavioural problems (typically beginning at two or three years) is known to be linked to conduct disorder in later life. Studies suggest between 7% and 20% of young children meet the clinical criteria for externalising conduct problems such as Attention Deficit Hyperactivity Disorder. The highest rates are found in families who are:

- on a low income or unemployed
- lone-parent
- without educational qualifications
- living in social sector housing.

Parenting and family interaction factors are estimated to account for as much as 30-40% of the variation in child antisocial behaviour (Asthana and Halliday, 2006).

5.2.1 Summary of the international evidence base on parenting education and support - behavioural interventions (Asthana and Halliday, 2006 and Moran et al, 2004)

- Most parent training programmes aimed at parents of very young, pre-school children have been developed as downward extensions of programmes specifically developed for school-age children. Greater consideration needs to be given to influence of developmental or maturational changes when tailoring parenting programmes to younger age groups. However, Webster-Stratton's ***Incredible Years*** programme (see below) is appropriately designed for toddlers and preschool children, has been demonstrated empirically to improve children's behaviour and to be cost-effective
- Group based-programmes can improve the emotional and behavioural adjustment of children under the age of three. However evidence for the maintenance of this improvement over time is not significant, and follow-up data are limited
- Parent education programmes *can* improve the behaviour of pre-adolescent children who have behavioural problems. However, interventions have tended to be implemented and evaluated in medical environments, and much of the research has been conducted in the US. Effects are sustained, but not universal – parents who typically continue to

experience difficulties are single parents, those suffering from maternal depression, alcoholism or drug misuse and of a low socio-economic status. Similar attributes apply to attrition rates from parenting programmes and are likely to depress initial uptake. This suggests that even when initiatives target people at greatest disadvantage; it remains difficult to engage those in most need. The effects for participants can, however, be quantified in terms of long-term benefits to the individual and society. Evidence indicates a return on investment measured in terms of downstream health costs and (in particular) costs to the criminal justice system, education and welfare services

- While both individual and group-based programmes are *effective*, there is some evidence that group-based programmes may be more *cost-effective* than individual clinic-based training, as well as providing parents with peer support
- The involvement of both parents and direct work with the child increases efficacy
- Additional interventions have been included alongside parent training to increase the effectiveness of parent programmes for parents of preschool children. For example, tackling family problems such as marital conflict and parental depression in addition to child behaviour problems has resulted in improved child outcomes, as shown by research using the enhanced ***Triple P*** programme (see below).

Summary: what do we know about the impact of parent education and support on child outcomes?

- Parent education programmes *can* improve the emotional and behavioural adjustment of young children and the behaviour of pre-adolescent children who have behavioural problems. However, there is currently little evidence that improvements are maintained over time
- Effects are not universal and the most disadvantaged families are least likely to benefit (because of the problems experienced by parents themselves and/or because they are least likely to become, or to remain, engaged with the programme). This suggests that even when initiatives target people at greatest disadvantage, it remains difficult to engage those in most need
- There is some evidence that group-based programmes are more cost-effective than individual, clinic-based training, as well as providing parents with peer support
- The involvement of both the mother and father, and direct work with the child increases efficacy
- Tackling family problems, in addition to child behaviour problems, has resulted in improved child outcomes
- However, much of the research to date has been conducted in the US

5.3 Parent outcomes

Parenting skills training is an aspect of parenting support that is relatively well researched, and there are a considerable number of reviews on this topic. This section of the paper summarises Moran et al (2004) in categorising the research evidence around the outcome categories of *parenting skills*, *parenting attitudes*, *parenting knowledge* and *parent mental health*.

5.3.1 Parenting skills

Interventions typically take the form of a structured course of sessions, are usually between 6 and 12 weeks in length and most take place outside the home setting, often in a community venue. Three sets of skills are commonly targeted by parenting support interventions, since these skills are thought to be associated with better outcomes for children as they develop:

- *Supervision and monitoring* – a number of studies have shown that effective supervision acts as a protective factor against the development of antisocial behaviour in young people
- *Boundary setting and discipline* – harsh or erratic discipline has been linked with poor short and long-term outcomes for children, including increased aggression, later antisocial behaviour, and poor mental health
- *Communication and negotiation* – such skills may help children resist the potentially damaging effects of peer-influence and promote reflective decision making in young people

The known effectiveness of parenting skills programmes

- Most reviews agree that there is now a relatively extensive body of evidence attesting to the effectiveness of parenting skills programmes and suggesting that boosting specific parenting skills is strongly associated with good outcomes for both parents and children
- Parents tend to report high satisfaction with having attended a parenting skills intervention, to express a sense of enhanced wellbeing or enjoyment of parenting afterwards and to report they have learned useful things and have implemented changes in the way they interact with their child that has eased pre-existing problems.
- Parents respond well to being taught specific skills to use in specific situations and receiving practical, take-home tips
- Where group-based methods are used, parents appear to draw comfort from learning that others face similar situations
- In the short term, both quantitative and qualitative studies show that parents report general enhancement of skills across a range of dimensions; but most studies collate only short-term impact data from parents
- The few studies that have collected follow-up data on parent outcomes report sustained improvement in parenting skills for at least one to two years following the programme, although these studies also report high rates of premature dropout
- Many parents fail to engage with the programme in active ways, and thus cannot reap the full benefits: how the programmes are implemented appears to be critical to their success
- Up to 40% of parents continue to report substantial difficulties with children after the termination of the programme. Factors that may predict negative outcomes include:
  - Socio-economic situation of the family at referral – poorer families do less well
  - High levels of family dysfunction
  - Severity of child's externalising behaviours at the time of referral

Suggestions for future research (Moran et al, 2004)

- Children's perceptions of changes in parenting as a result of participation in the programme
- As ideas about good parenting skills may vary by ethnicity, social class and sex of parent, it would be useful to focus on how well varying types of interventions serve different groups in the community

- Properly controlled longitudinal studies are required to assess the long-term impact of programmes

5.3.2 Parenting attitudes and beliefs

It is possible to distinguish between interventions (or parts of interventions) aimed at concrete aspects of parenting skills (as above) and those that focus on parenting attitudes – how parents feel and what they believe about their parenting (beliefs about child behaviour and development, perceptions of their own competence and ability to cope, general confidence and enjoyment in parenting).

There have been a number of reviews of the efficacy of cognitively based approaches, mostly coming from the US; in particular Parent Effectiveness Training (PET) and Systematic Training for Effective Parenting (STEP). Both these programmes rely heavily on verbal and written methods of training, usually in a classroom style format, with 'teaching' led by a trained facilitator intermixed with less formal discussion amongst group participants.

Known effectiveness of cognitively based programmes

- In general, research indicates that these programmes do have benefits for parents (measured by parent self-report)
- Meta analysis of 26 PET programmes suggests that effects can persist for up to six months, although the number of studies employing follow-up measures was relatively few.
- Although both PET and STEP have been implemented with socially and economically disadvantaged families (in the US) there does not appear to be any specific evidence that these programmes are effective for the most deprived populations
- As the programmes focus on thinking and talking rather than 'doing,' they do not seem especially appropriate for parents who themselves have high levels of family problems, or whose children are displaying more serious behaviour problems
- Conclusions of effectiveness are limited by a paucity of well-designed studies that meet rigorous scientific criteria
- Greater exploration is required of alternative formats or approaches that could work effectively with higher risk families to alter parenting attitudes and, ultimately, impact on child outcomes

5.3.3 Parenting knowledge

This third group consists of interventions focused on improving or extending parents' understanding and knowledge about child development, child care and child health. This type of approach may form a distinct part of a wider programme of parenting education/support, or may operate as a discrete intervention in its own right.

These approaches assume that improving parents' understanding of how children think, grow and develop will enable parents to tailor their own responses and behaviours towards their children more appropriately. They may then be better equipped to care for their children's physical needs (for example, protecting them from injury and health problems) or better informed about aspects of children's emotional, psychological and social development.

Moran et al (2004) note that research among parents themselves (including specific studies among families in deprived areas) shows that many parents express a need for both factual information and advice about a diversity of issues that arise in the course of normal family life.

Knowledge-based parenting programmes have been widely offered in many countries both as universal and targeted services. Frequently they have been targeted at particular need groups, especially adolescent mothers. The structure and intensity of these interventions ranges widely, from audio-visual materials made available in public places, to short information sessions and other low-level, time-limited programmes for groups of parents, to more intensive, formal services offered to groups or single individuals over a standardised time frame and working to a set curriculum.

Known effectiveness of knowledge-based parenting programmes

- Factual knowledge and understanding of child development and child care issues can certainly be enhanced in the short to medium term through services of this kind, for parents of all types and ages, and some 'less complex' parent behaviours may also be influenced
- Most studies that use a pre- and post-test methodology show statistically significant gains in knowledge following the intervention, and some show self-reported changes in behaviours
- Few studies were able to make robust measures of actual changes in behaviour, and almost all rely on self-report rather than independently verified observations, but there are some indications that interventions like these can change behaviours
- Although all types of parents have been shown to benefit, the more 'marginalised' the group, the greater the gains
- Men and boys may benefit less from these kinds of intervention than women and girls.

Suggestions for future research

- The extent to which gains in knowledge translate into measurable change in both parenting and child behaviours
- Whether promising low-level interventions can achieve the same results more cost-effectively than longer, more intensive designs
- Possible differences in effectiveness for men and boys as compared to women and girls, and the mode of intervention best suited to each sex
- The extent to which benefits persist in the medium to long term
- Whether follow up programmes and booster sessions could enhance effectiveness
- Whether programmes like this can achieve measurable change in outcomes for children
- The extent to which these types of approach 'add value' in integrative interventions combining information giving with other types of parenting support

5.3.4 Parenting mental health

Though the prevalence of mental health problems amongst the general population of parents is unknown, a systematic review of large scale epidemiological studies confirms that common ('neurotic') mental disorders are significantly more frequent in socially disadvantaged populations (Fryers et al, 2003). Scotland's own national '*Well? What do you think?'* survey highlights strong links between mental disorder and level of income, ease of

managing on income, and whether or not people live in a deprived area (Braunholtz et al, 2007) Work by Gould (2006) to estimate the prevalence of mental disorders among parents in England and Wales, notes the particular vulnerability of lone parents and people who are dependent for their income on social security transfers.

There is now a clear body of evidence indicating that parents with poor mental or emotional health often cope less well with the demands of parenting, and that this can have measurable adverse effects on children's wellbeing. Poor maternal health has been shown to adversely affect children's attachment (Stein et al, 1991), and long-term emotional and mental health (Rutter, 1972). More recently, it has been shown to be predictive of the persistence of children's mental health difficulties (Meltzer et al, 2003; Buchanan and Ten Brinke, 1997), and is associated with high levels of both physical and behavioural problems in children (Ghate and Hazel, 2002).

Most programmes are medium duration (eight to twelve weeks) and the content varies enormously, from discussion groups to formal educational training, including structured training in specific therapeutic techniques such as rational emotive therapy.

In summarising the evidence on programmes with a primary focus on the general emotional wellbeing of parents, Moran et al note that they do *not* include programmes that specifically aim to treat mothers with post-natal depression, or interventions for promoting better mental health among adults generally, some of whom will be parents.

Known effectiveness of interventions addressing parents' emotional and mental health

- Much of the evidence cited by Moran et al is based on individual studies relating to a variety of types of intervention, so it is difficult to take messages about their effectiveness
- Although feedback from participating parents may indicate 'feeling helped' by an intervention, this does not necessarily result in a measurable improvement in other types of outcome
- A systematic review of RCTs, assessing the effectiveness of parenting programmes aimed at improving maternal psychosocial health, concluded that a number of different approaches have been shown to be effective, although many focused on interventions for parents of children with severe behaviour or health difficulties. However, a diverse array of parenting programmes were found to be successful, indicating that perhaps common 'process' factors in the delivery of programmes may be a more important factor influencing effectiveness than any one theoretical approach
- Newpin is the best known UK example of interventions that offer support for parents with young children who are experiencing emotional difficulties. Newpin offers an initial home visit, followed by attendance at local centres, where befriending by volunteers as well as therapy and training are on offer. On the basis of available evidence, Newpin appears to make a significant difference to the mental health of *some* clients, but more rigorous evaluation, using matched comparison groups, is required. (At present, Newpin does not operate in Scotland)

Suggestions for future research

- Work to address the precise components of service delivery that influence the success of the diverse range of programmes on offer
- Further exploration of interventions that reduce risk for postnatal depression

- Work to address the mental health needs of fathers, parents from different ethnic groups and deprived social backgrounds, and how to support them
- Focus on long-term outcomes

Summary: what do we know about the impact of parent education and support on parent outcomes?

Parenting skills

- Programmes have been shown to be effective: boosting specific parenting skills is strongly associated with good outcomes for both parents and children
- Parents report enhanced wellbeing and enjoyment of parenting following the intervention
- Parents appreciate a practical approach to learning specific skills
- Parents draw comfort and support from their peers in group programmes
- How programmes are implemented appears to be critical to their success: it is important that parents engage actively in order to reap the benefits
- The most disadvantaged parents tend to experience the most negative outcomes
- Few studies have collected follow-up data on parent outcomes, although there is some evidence of improvements being sustained for up to two years
- Specific gaps in the evidence base are:
  - children's perceptions of changes in parenting as a result of the programme
  - how well varying types of intervention serve different groups in the community
  - assessment of the long-term impact of programmes

Parenting attitudes and beliefs

- Research indicates that programmes have benefits for parents (measured by self-report)
- Few studies have collected follow-up data, but effects have been shown to persist for up to 6 months
- There is no evidence that the major cognitively based programmes are effective for the most deprived populations, and they may not be appropriate for parents in the most distressed circumstances
- Alternative approaches of working effectively with higher risk families to alter parenting attitudes should be explored

Parenting knowledge

- Factual knowledge and understanding of child development and child care can be enhanced in the short or medium term, for parents of all types and ages
- Studies show significant gains in knowledge following the intervention, and some show self-reported changes in behaviours
- Few studies were able to make robust measures of changes in behaviour, but there are indications that interventions can change behaviours
- The most disadvantaged groups made the greatest gains
- Women and girls are likely to benefit more from these kinds of intervention than men and boys
- Future research could usefully focus on:
  - the mode of intervention best suited to each sex
  - better measurement of change in parenting and child behaviours
  - whether low-level interventions can achieve the same results as more intensive designs
  - whether benefits persist in the medium to long term

- whether follow up programmes and booster sessions enhance effectiveness

Parenting mental health

- A number of different approaches have been shown to be effective: it appears that common 'process' factors in the delivery of programmes may be more important in influencing effectiveness than any one theoretical approach
- Future research could usefully focus on:
  - the precise components of service delivery that that influence success
  - interventions that reduce risk for postnatal depression
  - the mental health needs of fathers, parents from different ethnic groups and deprived social backgrounds
  - long-term outcomes

5.4 The National Audit of Parent Antenatal and Postnatal Education Provision in Scotland, 2005

The purpose of the national audit, carried out in 2005, was to explore the nature and pattern of antenatal and postnatal education in Scotland and to make recommendations with a view to promoting the uptake of parent education opportunities. 'Parent education' was broadly defined as 'an intervention delivered with the aim of improving parents' capacity to care for their child …. activities that are offered over and above routine care and support to parents in addition to routine antenatal/postnatal services' (McInnes, 2005).

5.4.1 Literature review

A systematic review of literature published between 1992 and 2003 was conducted to establish the evidence base for interventions, beyond routine care, which aim to change or improve parenting skills (literature relating to interventions delivered in the antenatal period only is discussed in Chapter Two). In 2006, an update of the literature review was undertaken. This sought to include papers published between 2003 and 2006 and included 21 new papers that reported on 16 additional interventions.

The findings relating to post antenatal interventions are summarised here, although it should be borne in mind that much of the literature is likely to have been included in the Asthana and Halliday review.

Interventions delivered in infancy

- A total of 29 studies were found. Studies were located in a number of countries including England (eight) and Scotland (one) and targeted a range of vulnerable groups (e.g. teenage mothers, preterm babies, drug users, low income families)
- Studies addressed a range of outcomes, including knowledge, attitudes, psychological wellbeing, parenting behaviour and coping skills
- Home visiting had a mixed impact on diverse parenting issues, but education and individualised sleep management planning helped parents cope with unsettled infants
- A number of interventions targeted mothers who had postnatal depression, or who were at risk of developing it:

- Community midwives providing individualised care, sleep management planning, counselling and interpersonal psychotherapy appeared to be the most effective techniques
- Early postnatal debriefing was not successful in reducing postnatal depression

Interventions delivered in both the antenatal period and infancy

- Fourteen interventions met the review criteria, three of which was based in the UK
- Most of the studies targeted women at high risk of poor pregnancy outcomes, although two studies in the updated review recruited a relatively advantaged sample and a further two studies involved the partner
- Outcomes for all the studies varied widely and included smoking cessation, baby walker use, hospitalisation rates, immunisation rates, parenting behaviour, parental mental health and childhood injuries
- The most effective interventions appeared to be home visiting programmes, although further research is required to identify the specific context in which this can be most effectively employed
- Telephone support was effective in reducing stress and depression while increasing self-esteem and coping powers
- An educational package delivered by health visitors and midwives had an n positive impact on the use of baby walkers
- Leaflets had no effects on the outcomes measured

As noted in Chapter Two, the authors of both literature reviews acknowledged that most of the research was conducted out with the social and cultural context of the UK, and thus generalisability to populations in Scotland may be limited. There were other limitations to the studies, such as measuring a diverse range of outcomes, using assorted methods to deliver the interventions and a lack of evidence for the more vulnerable or excluded groups such as low-income or teenage parents.

No studies explored the views and needs of parents, including vulnerable or hard to reach groups who do not routinely attend antenatal education classes. The author noted that this might reflect the search strategy, designed to identify high quality *interventions,* but it is likely that research into parents' perspectives has received inadequate attention to date.

Therefore, the conclusion of the author of the updated review highlights the fact that, even taking into account more recent evidence, it is still not possible to improve parenting outcomes by identifying reliable strategies of intervention.

5.4.2 Mapping parent education provision in Scotland

Following the literature review, parent education service provision in Scotland was mapped and the views of professionals involved in the planning, management and delivery of these services was explored. A survey of a random sample of parents was also carried out, to include the views of those at whom services were targeted, and focus groups were conducted with representatives of parents who may not access routine services.

Parent education provision

- A range of parent education initiatives outwith routine services were available in Scotland (although the majority of service provider respondents were from the central belt)
- The major focus of parenting intervention was knowledge acquisition, particularly in relation to nutrition, child development, play and relaxation
- Most of the services offered some sort of peer or social group support and around half provided stress management and assisted parents in accessing other services and benefits
- Topics were delivered by a variety of methods, with the most popular being group work/workshops, followed by one-to-one interventions, written information and drop in sessions
- Postnatal services were offered most frequently in the first few months after birth, declining gradually throughout the first year
- Parent education services were most frequently delivered by health visitors, followed by parents and midwives.
- A number of providers collaborated with other organisations in the delivery of their services
- The majority of senior management reported involving users/parents in service planning, although fewer had been involved in decision making or the day to day running of services
- Parenting services targeted a range of individuals, including mothers, teenage parents, fathers, parents from ethnic minorities, parents with a range of health and lifestyle challenges. Most providers believed they reached some of the target group
- Only a small number of services had completed any formal evaluation, and those that had were likely to be part of Sure Start Scotland or Starting Well

Views of providers and users on parent education

- Format of services – service providers offered parent education in different locations, targeted at different people and offered different topics delivered by a variety of methods
    - The majority of mothers found the information they had received at antenatal classes useful, although less than half had received all the information they felt they needed (e.g. dealing with problems or complications). Those who felt they had been involved in determining content were more likely to be satisfied with how the classes had been run
    - Mothers attending postnatal classes had been more involved in deciding content. Main reasons given for attending were to meet other mothers, get advice on feeding, emotional support and practical aspects of baby care
    - Providers stated that they usually catered for parents' wishes, and recognised that informational support was usually what was required. They believed that emotional support was generally provided by the peer group. Providers expressed some concern that services aimed to promote healthy behaviours, such as breastfeeding, rather than support the parent's decision
    - Providers felt that the most common methods of delivering parent education were also thought to be the most effective (i.e. group work/workshops, followed by one-to-one sessions and drop-in services)
    - The majority of mothers had received postnatal advice or information, usually as part of routine postnatal care delivered by midwives and health visitors
    - Most parenting services were provided at regular intervals, with a smaller proportion provided on demand. Some were provided as a short course – e.g. six-

week block. The need for regular sessions was highlighted as a means of providing security and belonging, keeping clients engaged, building relationships and addressing problematical areas
    - Providers had differing views about who was the 'right' person to deliver the service (e.g. a person with similar experiences to the client, volunteers or other parents either independently or in co-facilitation with a professional person). Health professionals were not always seen to be the right people, due to different background, potential lack of empathy and different life experiences
    - Parents felt that a lack of uniforms made groups more accessible, although some felt it was important to have professional input and structure to the group.
- Accessibility of services – because most respondents were based in urban areas, important issues to do with remote or rural accessibility may not have been covered
    - Providers suggested that childcare problems, transportation, timing of services, location, cost of attending, parents' perceptions of services in relation to themselves and other lifestyle pressures could affect participation
    - Providers also noted that lack of motivation, apathy and a lack of understanding of the need for parent education could reduce uptake of parent education services
    - Providers suggested that facilities such as crèche provision, a café and space to take time out might improve attendance
    - Providers felt it was useful to discuss issues in the environment where most of the parenting would take place, and where clients were most relaxed, and thus supported service delivery within the client's home

Weblink to summary report:
http://157.203.43.151/uploads/documents/Section1.pdf

Summary: what do we know about parent education provision in Scotland?

Provision

- A range of parent education initiatives is available across Scotland, although the central belt may be better served than more rural and remote areas
- Topics are delivered by a variety of methods: group work/workshops are the most common
- Services are delivered by a range of different professional groups and volunteers (including health visitors, midwives and parents)
- Users/parents are often included in service planning, although involvement in decision making and the day to day running of services is less common
- Services target parents facing a range of health and lifestyle challenges and most providers believe they reach some of their target group

Views of providers and users

- Mothers found both antenatal and postnatal classes useful for practical advice and emotional support, including from other mothers. A need was expressed for more information about dealing with problems
- Mothers who had been involved in determining the content of classes were more likely to express satisfaction
- Providers usually catered for parents' wishes and believed that emotional support was generally provided by the peer group
- Providers expressed some concern that the focus of the education was on promoting healthy behaviours (e.g. breastfeeding) rather than supporting the individual parent's decision

- Regular sessions were felt to be important to provide security, keep people engaged and to build relationships
- Providers had differing views about who should deliver a service and the relative importance of personal experience and professional skills

Accessibility of services
- Providers felt that a range of issues around accessibility, motivation and understanding could affect participation in classes
- Providers supported service delivery within the client's home, the environment where parenting is taking place

5.5 Parenting programmes in Scotland

An unpublished literature review carried out by a team from Greater Glasgow Health Board in 2004 aimed to identify and compare the effectiveness of the major parenting education programmes employed in Glasgow (Hacker et al, 2005) The review claims that the five major programmes in operation in the UK are:
- Triple P
- Incredible Years
- Mellow Parenting
- Veritas/Family Caring Trust
- NCH

Thirty-eight articles met the review's inclusion criteria, although only two articles related to Mellow Parenting, two to NCH programme and two to Veritas/Family Caring Trust programme. While the majority of studies evaluating the Incredible Years programme and the Triple P programme were considered by the authors to meet a high research standard, no controlled trial design was employed in assessing the effectiveness of Mellow Parenting, the NCH programme or the Veritas/Family Caring Trust programme. Because of this, the review was unable to meet its aim to compare the effectiveness of the individual programmes and, consequently, is less useful than it might have been. In addition, although several of the papers reviewed specified that the intervention was targeted on parents of children with disruptive behaviour, there is no specific reference to the socio-economic circumstances of families included in the studies.

The review did not specifically report the results of using the programmes in Glasgow, and there are also studies from the remainder of the UK that have not been included. Below I have summarised findings from the review, with additional information as relevant. (I have tried to make it quite clear what comes from the review, what does not, and (if appropriate) where I am commenting on the review findings. If possible, I have also included more of an introduction to each of the programmes than appeared in the review.

5.5.1 Triple P programme

The *Positive Parenting Programme* ('Triple P') is a Behavioural Family Intervention programme based on social learning principles. Originally developed in Australia in the

1970s, and used widely in a range of countries and situations, it is a programme with standardised training and accreditation processes. Delivered to parents and not to children, it works at five levels (from community based to a narrow targeted focus):

- Level 1: population level for all interested parents of children 0-16 years (promotion of parenting style through media, parenting tip sheets etc)
- Level 2: brief early intervention strategy for parents of children with mild behavioural/developmental issues. Delivered through primary care services (1-2 consultation sessions, tip sheets, videotaped programmes)
- Level 3: more intensive early intervention strategy, targeting parents of children with mild to moderate behavioural/developmental difficulties (involves four sessions providing active skills training for parents)
- Level 4: group or self-directed parent training programme for parents of children with more severe behavioural/developmental difficulties (involves 8-10 sessions of intensive work with parents, offered as three separate delivery approaches)
- Level 5: enhanced programme, individually tailored. Aimed at whole families with persistent childhood behavioural problems and where other sources of parental family stress are present

The programme is based on five core parenting principles:

- Ensuring a safe and engaging environment for children
- Creating a positive learning environment for children
- Using assertive discipline
- Having realistic expectations, assumptions and beliefs about the causes of children's behaviour
- The importance of parental self-care

Triple P is of particular interest because of its adoption as part of the Starting Well Health Demonstration Project in Glasgow (see Chapter Four, Section 4.4). From a policy-making perspective, and particularly in relation to inequalities, the division of 'Triple P' into five delivery levels of increasing intensity is key.

The review included 23 effectiveness studies assessing Triple P, of which 19 were classified as RCTs.

- The studies reported improvements in children's disruptive behaviour, parent-child interaction, parenting conflicts, relationship satisfaction and communication.
- Improvements in disruptive behaviour were maintained for up to two years after intervention
- The intervention was described as effective within a range of settings (standard, self-directed, telephone-assisted, group and enhanced intervention) and with several different family types
- One factor limiting the quality of the research is the fact that Sanders (who devised the programme) collaborated with most of the reported effectiveness studies, raising questions as to their objectivity.

The review was carried out too early to capture an evaluation of Triple P within the Starting Well Demonstration Project (Cunningham Burley et al, 2006). This work was particularly important because it set out to evaluate the use of Triple P in a Scottish context, as well as its acceptability to staff and parents as one part of the broad Starting Well intervention. However, the focus of the evaluation was on *process* rather than *outcomes.* The central research questions were:

- Is Triple P being consistently and appropriately used with all families within the Starting Well Project?
- Do Project workers have an understanding of the programme and a belief in its value and efficacy?
- Do Project workers feel adequately and appropriately supported to deliver Triple P?

Data collection involved interviews and focus groups with a range of Starting Well staff and with parents.

Main findings:

- There was overall support for Triple P from providers; however –
  - because parent education programmes are not yet 'normalised' within the community, staff felt they had to be careful not to stigmatise families by suggesting Triple P
  - practitioners felt that materials were too Australian and focused on overly affluent families. Materials required adaptation for the Glasgow and Starting Well context
  - practitioners felt that cultural differences between Australia and deprived parts of Glasgow might be stumbling blocks for families and staff
  - delivery of Triple P was affected by health professionals' perceptions of the relative priorities of families and their readiness or ability to receive Triple P
  - there was a view that the families that could most effectively be offered Triple P were those whose lives were more ordered and where there was good relationship between health care worker and parent – i.e. not targeting the most deprived families
  - confidence to deliver Triple P and a strong personal belief in the model were essential determinants of staff commitment to Triple P and influenced whether and how staff delivered the programme

- Parents who had participated in Triple P groups were generally supportive of the programme, appreciated spending time with like-minded people experiencing the same kind of life difficulties (not just parenting), and were enthusiastic recruiters of other parents to Triple P. However –
  - there was some reluctance to be involved in groups, because of concerns that they would be labelled as 'bad parents' and their perceptions of other group participants as being different from themselves
  - Triple P materials were seen as discrete packets of advice, rather than as part of a different approach to parenting
  - the relative affluence of the parents depicted in the visual materials were more of an issue than the 'Australianess' of the materials

The evaluation concluded that the 'social support' element may be important as a way of encouraging parents to engage with parent education programmes, and to maintain their participation. Parents' discomfort within some group settings may be a production of professionals' scepticism about Triple P and a lack of confidence to work proactively in complex social settings. Training and support for professionals was highlighted as the most pressing task for Starting Well, to ensure staff are confident and enthusiastic providers of Triple P.

5.5.2 Incredible Years Programme

The programme was developed in the 1980s by Carolyn Webster-Stratton, a Canadian educational psychologist with a public health nursing background. The programme is aimed at parents of children aged 1-10 who have early indications of conduct disorder, or are at high risk of developing conduct disorder. It is a behavioural-humanistic programme addressing child behaviour and the parent-child relationship. It was used in the US Head Start programme and has been used in various Sure Start initiatives in Wales. The initiative comprises a number of different interventions involving parents, teachers and children:

- BASIC Parent Training Program, targeting parenting skills and delivered in the home
- ADVANCE Parent Training Program, targeting interpersonal skills for parents, delivered in the home
- EDUCATION Parent Training Program, targeting academic skills for parents, delivered in home and school
- Teacher Training Program, targeting classroom management skills and delivered in schools
- Child Training Program, targeting social skills, problem solving and classroom behaviour, delivered in home and school.

The review included nine evaluation studies, of which seven were classified as RCTs.

- The parenting intervention has been demonstrated to enhance parenting skills (use of praise, limit setting etc) and parental self-confidence
- The teacher programme has demonstrated an increase of peer- and teacher-child interaction, bonding with parents, and proactive classroom management strategies
- In relation to children, studies demonstrated an increased use of appropriate cognitive problem-solving strategies and more pro-social conflict management strategies with peers. Children were also reported to be more socially competent and demonstrated a reduction in conduct problems at home as well as in school
- A limiting factor with this research is that Webster-Stratton (who devised the programme) has collaborated with the majority of the research studies, and therefore that objectivity may have been affected
- Further research is required to demonstrate that the intervention is effective in targeting a range of children's behavioural problems across settings

The Incredible Years Basic Parent Programme was evaluated in 11 Sure Start areas in Wales, with parents of pre-school children at risk of developing conduct disorder. The evaluation began in 2002. Participating families were randomised to intervention and waiting-list control condition. (This evaluation was not included in the review above. I presume there was some reason why it did not meet the inclusion criteria, but it is a useful piece of work, nonetheless.)

Every attempt was made to ensure fidelity of programme content and delivery. In addition, the Sure Start areas paid attention to issues of access, child care and provision of a family meal. (The Incredible Years programme addresses these issues to encourage high-risk families to engage with services.) The main findings are as follows:

- At the six-month follow-up, significant improvement in parenting and child problem behaviour was seen on the vast majority of measures for the intervention group only
- Behaviour changes were robust and maintained up to the 18-month follow up

- The programme worked equally well across all participating Sure Start areas, regardless of differing crime levels
- A bolt-on study of cost-effectiveness showed that the parent programme represented good value for money (see Chapter Eight for more detail)

The authors concluded that parent programmes can be effective in disadvantaged Sure Start areas when those who need help most are targeted effectively by knowledgeable health visitors; programmes are implemented with fidelity; group leaders are supervised and accredited; barriers to attendance are addressed (Hutchings et al, 2007).

5.5.3 Mellow Parenting

Mellow Parenting is a 14 week, one day a week group designed to support families with relationship problems with their infants and young children. It combines personal support for parents with direct work with parents and children on their own parenting problems, and has proved effective in recruiting and engaging families with a variety of severe problems.

Mellow Parenting was devised to meet the needs of 'hard to reach' families, particularly where behavioural problems are compounded by family difficulties such as parental mental illness, social isolation, domestic violence, parental literacy problems. It is, in part, a way of working rather than a tightly prescribed curriculum, and variants of Mellow Parenting have been devised to meet varying needs (such as Mellow Fathers, Parenting in Prison, Mellow Babies for Infants at Risk).

Two studies evaluating the Mellow Parenting programme were included in the review. Results indicated that:
- Intervention improves parent-child interaction, child centredness, mother's mental health and child behaviour problems
- Programme would profit from more rigorous scrutiny, using research design incorporating a control condition and longer term follow up

The review does not note that Christine Puckering, lead author on both studies, is responsible for developing the programme, so the programme currently lacks independent evaluation. However, the Mellow Parenting programme has the advantage of being developed and applied in deprived populations in Scotland.

5.5.4 Veritas/Family Caring Trust programme

The review gives no details of what this programme involves, and the Family Caring Trust website indicates that it endorses no one model. Two research articles reported that the intervention increased parenting confidence and increased parents' self-esteem, but sample sizes in both studies were small and it is not clear whether the studies evaluated the same intervention. Without more information it is not possible to investigate the approach further.

5.5.5 NCH programme

Again, the review gives no details of what this programme involves, and I have been unable to find any information about it. Two research articles suggested that the intervention improved mothers' attitudes towards their children, and knowledge of behavioural principles. It was not clear whether the described positive outcomes can be maintained over time, as no long-term follow-up study had taken place.

5.5.6 Audit report

An audit report was carried out in tandem with the literature review described above, to establish the range of parenting education programmes in the City of Glasgow by Health, Education, Social Work and Voluntary Sector providers. The report also set out to identify basic demographic features of parents/carers attending the programmes (Hacker et al, 2004). However, the audit's response rate was low (20%) so these results are unlikely to summarise all courses available in Glasgow, or a reliable profile of parents/carers using them. Therefore this is not a comprehensive picture of parenting programme provision in Glasgow, and findings should be treated with caution.

The audit questionnaire required respondents to specify whether they were using one of the five interventions described above or 'other' (for purposes of analysis, a category comprising: a combination of standard approaches, tailor-made interventions, and programmes that were not further specified). I am not sure whether the five interventions are the *only* standardised parenting programmes whose effectiveness has been measured, and (because of the compressed 'other' category) it is not possible to tell from the audit report whether other such programmes were found. It is unfortunate that the category was compressed, because 'other' was the most frequently employed approach to parenting (54% of responses). Consequently, it is difficult to take useful messages about provision from the responses as reported.

The questionnaire did not specifically ask providers how they targeted the programme/s they were using, although the report includes a summary of to whom parenting programmes are offered (based on questions on ethnicity and involvement of individual family members). The main issues thought to be preventing parents/carers from attending sessions were 'lack of understanding of the reasons for parenting group' and 'lack of interest,' both of which seem to be highly relevant to people in disadvantaged circumstances.

Several of the findings are important, despite the low response rate. At the time of the audit, there was a broad range of standardised and non-standardised parenting education programmes in use in Glasgow. These programmes reflected a variety of theoretical perspectives on child management, including behavioural management training, parenting skill training, cognitive behavioural problem-solving approaches. However, parenting education provision was, largely, both idiosyncratic and non-evidence based, and fewer than half the providers were accredited in the programme they were using. Most programmes were offered exclusively on weekdays in the daytime, making it difficult for working parents to attend sessions. The authors also suggest that lack of interest or understanding of parenting programmes emphasise the importance of destigmatising parenting education. However, as only providers' views were considered, this could not be investigated.

The report acknowledged several limitations to the study, including:

- lack of focus on the perspectives of the users/potential users of parenting programmes
- analyses of data were restricted by the questionnaire design
- the (relatively) low programme drop-out rates (22%) were based on provider self-report only
- it had not been possible to investigate the 'other' category of provision
- study did not investigate local pre/post programme measures

One final point in relation to the audit report: respondent identity was protected, and the authors claimed that this prevented individual follow-up of providers. Any measures that might have boosted response rates would have been useful, and it is not clear why confidentiality was an issue, since the intended respondents were professionals answering questions about the programmes they provided. No information was requested that would breach the confidentiality of individuals attending those courses.

An unpublished paper prepared by Rona Dougall of NHS Greater Glasgow and Clyde contains a useful summary of the range of parenting initiatives operating across the UK. It includes an overview of the features of Triple P, Incredible Years and Mellow Parenting and indicates the ways in which these programmes have been evaluated. It is particularly helpful because it indicates that all three are aimed at and/or evaluated with parents of children in areas of high deprivation, and because it focuses specifically on evidence from the implementation of the programmes in the UK. The paper draws heavily on Hacker et al, but does not focus on the limitations of the data. It provides a very helpful summary table, which is reproduced here (with Rona's permission). When it appeared in Rona Dougall's paper, the table included notes linking to various sections of the paper, which I have removed because I have not reproduced the paper. I hope that all relevant issues have been covered in the paragraphs above.

Table 5.1: summary of parenting programmes (Rona Dougall, GGC)

	Criteria/feature	Triple P	Webster-Stratton	Mellow Parenting	Comments
Evidence based	Used successfully internationally e.g.	√	√ Head Start (USA)		
	Used in UK e.g.	Starting Well	Sure Start (Wales)	Community sites, (Scotland)	
	Published evaluations (positive)	√	√	In progress	
	RCT evaluations	√	√		
	Meets NICE guidelines[9] re social learning theory	√	√	√	
	Includes relationship enhancing strategies		√		
	Uses humanistic theory		√		
	Uses family systems theories		√		
	Population level approach	√			
	Multi-level	√			
	Group based	√	√	√	
	Uptake generally good	√	√	√	
	Has adaptations for specific situations/groups	√	√	√	
	Delivered to parents (other family carers)	√	√	√	
	Includes delivery element to children		√	√	
	Enables parental self-direction	√	√		
	Covers 0-16 years	√	√		
	Covers early years	√	√	√	
	Evaluated with early years age		√		
	Addresses families with complex problems	√	√	√	
Aimed at/evaluated with parents of children:	with diagnosed conduct disorder (CD)		√		
	with high risk of developing CD	√	√	√	
	in areas of high deprivation	√	√	√	
	Benefit to siblings shown		√		
	Follow-up evaluation	√	√	√	6-18months
Personnel	Can be delivered by HVs	√	√	√	
	Clinical supervision required				
	Home visits incorporated		√		Can be
	Involvement of school teachers		√		
	Uses video modelling	√	√	√	
	Uptake good / drop out rates low		√	√	

[9] NICE guidelines relate to parent-training programmes in the management of children with conduct disorder. Recommendations include that programmes should be group-based, evidence-based, reach those with access difficulties, incorporate role play and homework and be delivered by trained facilitators

Summary: what do we know about the effectiveness of parenting programmes?

- Group-based programmes can improve the emotional and behavioural adjustment of young children, although there is limited evidence for the maintenance of this improvement over time
- Parenting programmes can make a significant difference to the short-term psycho-social health of mothers, although it is not clear that these results are maintained over time
- Even when initiatives target people at greatest disadvantage, it remains difficult to engage those in most need
- The effectiveness of two of the five standardised parenting programmes operating in the UK (Triple P and Incredible Years) has been evaluated using a controlled trial design:
    - *Triple P* (which involves five delivery levels of increasing intensity) was reported to improve a range of behaviours and relationship problems for up to two years after intervention, to be effective in a range of settings and with several different family types.
        - In Scotland, providers felt that Triple P was more effective for those whose lives were more ordered – i.e. not the most deprived families.
        - The possible stigma of attending a parenting programme was an issue for both providers and parents
        - The relative affluence of parents in visual materials was more of an issue for participants than the 'Australianess' of the materials
    - *Incredible Years* (which comprises a number of interventions and target groups) was reported to enhance parenting skills and parenting self-confidence, along with a range of other positive effects.
        - Evaluated across Sure Start areas in Wales, improvements in child problem behaviour were maintained up to the 18-month follow up
        - Authors concluded that parent programmes can be effective when those who need help most are targeted by knowledgeable health visitors, programmes are implemented with fidelity, group leaders are supervised and accredited and barriers to attendance are addressed
- The *Mellow Parenting* programme (which is more a way of working with a variety of needs than following a prescribed curriculum) was developed for and applied in deprived populations in Scotland. Evaluation data is available, and indications are positive, but more rigorous scrutiny and follow up are required
- It is difficult to extract clear messages from such a diffuse subject area. Evaluations relating to the application of parenting programmes in the UK – and specifically in Scotland – are few, and it is not clear whether findings from countries with different health and social care systems are transferable to Scotland
- The people responsible for developing *Triple P, Incredible Years* and *Mellow Parenting* have been closely involved in the evaluations of the programmes to date, possibly compromising the objectivity of the findings

5.6 Initiatives to promote positive parenting in Scotland

5.6.1 Parenting Across Scotland (PAS)

PAS is a multi-agency partnership project, funded by the Scottish Government, which aims to:

- Research the concerns and issues affecting parents and families in Scotland
- Co-ordinate and improve the information and support available
- Gain greater recognition for the job parents and families do in bringing up Scotland's children
- Represent the views of parents in policy

PAS partners support families through the provision of a wide range of services including parenting projects; family centres; family conferencing; relationship support, counselling and mediation.

5.6.2 OK to Ask Gateway Telephone Helpline

The gateway comprises a single entry point through the 'Parentline Scotland' number, which provides an initial 'listening ear' with direct and indirect referrals between participating partners. The pilot ran from April 2006 to March 2007 and was externally evaluated by SMCI Associates. I was unable to access a full evaluation report, but key findings are reported on the PAS website:

- The peak call month for partners was May 2006 when OK to Ask was launched to coincide with the Family Law (Scotland) Bill
- Callers, call-takers, helpline managers and strategic staff all thought the gateway was a good idea
- There was a general lack of clarity over the nature and purpose of the gateway
- A lack of clear and established protocols led to a degree of mistrust among partners
- The different opening hours of the partner agencies were identified as problematic

The evaluation made a number of recommendations including:

- Developing a shared vision for the gateway
- Reviewing the gateway partnership
- Facilitating user involvement

PAS identifies the further development of the OK to Ask parent information initiative in the plan of future work (2007-10).

Weblink to report of work undertaken and future plans:
http://parentingacrossscotland.org/publications/PAS05-07.pdf

5.6.3 Parent Information Points

In 2006, PAS, with the support of the Scottish Executive, piloted Parent Information Points (PIPs). The key aim of the PIPs was to *'deliver a universal service, accessed quickly and easily, ensuring that the sessions were packaged in a user-friendly, non-stigmatising, non-threatening way'*. They did this by providing a single two-hour session in a school which focused on one of the three transitional stages. Parents were given an open invitation to attend.

The main features of a PIP session were:

- a marketplace of representatives of local support agencies;

- a ‘ten top tips’ presentation about child development at the relevant transitional stage
- presentations or workshops from other agencies on subjects relevant to the age group.

The pilot ran from May to November 2006 and the evaluation was completed in February 2007. Four of the five PIPs focused on High Schools, but one focused on a pre-school project.

Key findings:

- It was difficult to attract parents to Parent Information Points, particularly the parents of teenagers
- Parents and agencies thought that PIP was a good idea, although having little idea what the session would entail
- The market place was the most successful aspect of the PIP format, with 100% of parents finding it helpful. Some parents thought that the market place was more useful to their teenage children than to themselves.
- The workshops were the second most successful aspect of the PIPs for parents, with two thirds (66%) finding them helpful and enjoyable
- Just over a tenth (13%) of parents said that the best thing about the PIP was meeting other parents.
- 100% of parents who attended said they would recommend the PIP to a friend. Some parents had already passed information gathered at the PIP onto friends.
- Participants in general (parents, agencies, pupil helpers) thought there was a good range of information (78%), with 60% saying that the PIP was ‘useful’, 55% saying that it was helpful and 48% saying that they would come again.
- 86% felt better informed about support services available to families, with 70% saying that they were likely to use services they found out about at the PIP and 78% of participants in general also felt better informed about the teenage years, with 66% saying that they felt more confident about parenting.

Weblink to summary of evaluation findings:
http://www.parentingacrossscotland.org/publications/200707_PIPSPASSUMMARY.pdf

5.6.4 A model for parenting services for Glasgow (draft)

An unpublished draft discussion paper (quoted with permission from lead author Phil Wilson) provides an evidence-based model for parenting services in Glasgow. Naturally, it is outwith the remit of this work to comment on the model, and the document relates closely to the report of the Expert Working Group on Infant Mental Health, (HeadsUpScotland, 2007) but the paper highlights a number of considerations that are likely to be more widely applicable, and chime with the findings of earlier chapters of this paper. The model comprises a number of different levels which span the various age groups (0-3, 3-5, 5-12 and 13-18). Naturally, the approaches within the levels vary between the age groups: here initiatives relevant to the first two age groups are included.

Low cost universal interventions

- Baby carriers and backward-facing buggies that bring babies into close contact with parents’ faces and bodies

- Baby massage (shown to improve babies' sleep and contentment, as well as lift the mood of depressed mothers)
- Using opportunities to deliver infant mental health messages using mass media programmes
- Open access parenting classes delivered to large numbers of families

Active filtering

- Early intervention to maximise chances of success, because younger, pre-symptomatic children are more likely to be amenable to change than children with entrenched pathology and damaged social relationships – a possible intervention is Mellow Babies (a version of Mellow Parenting aimed at very vulnerable families with infants aged under one year) although more rigorous evaluation is required
- Health visitor training in the field of evaluating parent-child relationships
- Routine health visitor contact with families to continue for one year (instead of 8 weeks)
- Further need for contact from health visitors with all families when the child is in the third year of life (telephone or questionnaire), since early language delay is a powerful indicator of child psychopathology
- Health visitors to be kept informed about any concerns that GPs or other service professionals have about the child

Additional assessments

- Robust methods for additional assessments of children and families who give cause for concern to either the families themselves or to the health visitor
- Structured assessment to include a number of measures focusing on the child, the parent, the relationship and the family (and the possibility of a further battery of measures)
- A small number of health visitors (perhaps one per Community Health and Care Partnership) to receive 6 months' training to become proficient in using all the tools

Interventions

- The Incredible Years programme (where the child is between 3 and 5 years)
- The Triple P programme for children under 3 years (at least until the Incredible Years initiative is modified for use in younger children
- For families with additional needs, a more intensive intervention may be needed. The Mellow Parenting programme is one such approach, although further evaluation of the programme is required
- Support may be necessary to enable vulnerable families with additional needs to use these programmes (child care, transport, accessible venues)

Summary: promoting positive parenting in Scotland

- *Parenting Across Scotland (PAS)* is an example of a multi-agency partnership project which aims to research the concerns and issues affecting parents, and the support available, to share good practice, represent the views of parents in policy and promote a positive image of parenting.
    - *OK to Ask* provides a gateway approach to parent helplines. Evaluation of a pilot in 2006-07 indicated that the gateway was welcomed by all stakeholders, but there was a general lack of clarity about its nature and purpose.
    - *Parent Information Points (PIPs)* are single 2 hour sessions in schools designed to provide a marketplace of representatives from local support agencies, a presentation about child development and presentations/workshops from other

agencies on subjects relevant to the age group. Evaluation indicates that parents are satisfied with the information they have received from PIPs, but there has been difficulty getting parents to attend

- *A model for parenting services in Glasgow (draft)* provides an evidence-based model for parenting services. The model comprises a number of levels:
  - *Universal interventions*: baby buggy design to bring babies into close contact with their parents' faces and bodies; baby massage; using mass media to deliver infant mental health messages; open access parenting classes
  - *Active filtering:* early intervention to maximise chances of success; health visitor training in the field of evaluating parent-child relationships; routine health visitor contact to continue for the first year of life; further health visitor contact with all families when the child is in the 3rd year of life; health visitors to be kept informed about any concerns that GPs or other service professionals have about the child
  - *Additional assessments:* additional assessments of children and families who give cause for concern (including a wide range of measures); health visitors to receive 6 months' training to become proficient in using the tools
  - *Interventions:* Triple P programme (children under 3 years); Incredible Years programme (for children between 3 and 5 years); a more intensive intervention for families with additional needs (possibly Mellow Parenting); support to enable vulnerable families with additional needs to use the programmes

CHAPTER SIX THREE TO EIGHT YEARS – EARLY YEARS EDUCATION AND CHILDCARE

6.1 Introduction

It is difficult to distinguish categorically between childcare and education for young children, since good care always has an educational value. In addition, with a range of imperatives and perspectives and a complex mosaic of provision (ranging from informal to formal care, individual to group-based provision, open access to specialist referred provision and services that are free at the point of delivery or command the market price) it is difficult to establish categorically what works, for whom, in what circumstances.

6.2 Pre-school education (The Effective Provision of Pre-School Education (EPPE) Project)

The EPPE project, which began in 1997, is the first major European longitudinal study of a national sample of young children's development between the ages of 3 and 7 years. To investigate the effects of pre-school education, the EPPE team collected a wide range of information on 3,000 children. The study also looks at background characteristics relating to parents, the child's home environment and the pre-school settings children attended. Settings (141) were drawn from a range of providers – local authority day nurseries, integrated centres (combining education and care), playgroups, private day nurseries, nursery schools and nursery classes.) All settings were in England. A sample of 'home' children (who had no or minimal pre-school experience) were recruited to the study at entry to school for comparison with the pre-school group.

EPPE used a range of data collection methods, including standardised child assessments over time; child social/behavioural profiles; interviews with parents and pre-school centre staff; quality rating scales; case study observations and interviews.

Findings published in 2004 covered the effects of education in the pre-school period (ages 3 and 4) as measured at primary school entry (rising 5) and in years 1 and 2 (ages 6 and 7) (Sylva et al, 2004).

Weblink to summary of findings:
http://www.dfes.gov.uk/research/data/uploadfiles/SSU_SF_2004_01.pdf

The aims of the EPPE project were to explore five questions:

- What is the impact of pre-school on children's intellectual and social/behavioural development?
- Are some pre-schools more effective than others in promoting children's development?
- What are the characteristics of an effective pre-school setting?
- What is the impact of the home and childcare history on children's development?
- Do the effects of pre-school continue through Key Stage 1 (ages 6 and 7 years?)

Key findings over the pre-school period include the following:

Impact of attending a pre-school:

- Pre-school experience, compared to none, enhances all-round development in children

- Duration of attendance is important; an earlier start (under age 3) is related to better intellectual development
- Full-time attendance led to no better gains for children than part-time provision
- Disadvantaged children benefit significantly from good quality pre-school experiences, especially where they are with a mixture of children from different social backgrounds
- Overall, disadvantaged children tend to attend pre-school for shorter periods of time than those from more advantaged groups (around 4-6 months less)

Does the type of pre-school matter?

- There are significant differences between individual pre-school settings and their impact on children. Integrated centres and nursery classes are more effective than others in promoting positive child outcomes
- Good quality can be found across all types of early years settings; however, quality was higher overall in integrated centres and nursery schools

Effects of quality and specific 'practices' in pre-school

- High quality pre-schooling is related to better intellectual and social/behavioural development for children
- Settings that have staff with higher qualifications have higher quality scores, and their children make more progress
- Quality indicators include warm interactive relationships with children, having a trained teacher as manager and a good proportion of trained teachers on the staff
- Where settings view educational and social development as complementary and equal in importance, children make better all round progress

The importance of home learning

- For all children, the quality of the home learning environment is more important for intellectual and social development than parental occupation, education or income. What parents do is more important than who parents are.

Key findings at the end of Key Stage 1 include the following:

Duration and quality

- The number of months a child attended pre-school continued to have an effect on their progress throughout Key Stage 1, although this effect was stronger for academic skills than for social behavioural development
- Pre-school quality was significantly related to children's scores on standardised tests of reading and mathematics at age 6. At age 7, the relationship between quality and academic attainment was somewhat weaker, but still evident, and the effect of quality on social behavioural development was no longer significant. High quality pre-school provision combined with longer duration had the strongest effect on development

Effective settings

- Individual pre-schools varied in their effectiveness for influencing a child's development. The advantages for a child's development of attending a particularly 'effective' pre-school centre persists up to age 7.

Vulnerable children

- A small group of children continued to be at risk of special educational needs, with more of the 'home' children falling into this group, even after taking account of background factors
- Multiple disadvantage continued to have a negative effect on intellectual and social development up to the end of Key Stage 1.

Home learning environment

- The effect of home learning activities during the pre-school period continues to be evident in children's developmental profiles at the end of Key Stage 1

Although the EPPE project focused on child development and early learning *per se,* the study design over-sampled areas with ethnic diversity and low socio-economic status (SES) families, and a number of findings are particularly relevant to children from disadvantaged families, as noted above.

As part of the wider study, the EPPE team was commissioned to conduct an investigation into children who might be 'at risk' of special educational needs (SEN). The Early Years Transition and Special Educational Needs (EYTSEN) project was a sub-study within EPPE. EYTSEN focused on children from ages 3-6. The study used a range of information to identify children 'at risk' of developing SEN (child assessments, parental questionnaires, and 'child profiles' completed by primary school teachers). The major findings are included in the summary above, but more detail is provided below:

- For cognitive outcomes, children with multiple disadvantage (in terms of child, family and home environment characteristics) were much more likely to be identified as 'at risk'
- Background characteristics showed weaker links with social/behavioural development
- The quality of the home learning environment (related to parents' reported activities with their pre-school child) showed a strong relationship with 'at risk' status. A more stimulating home learning environment benefits both cognitive and social/behavioural development.
- The home learning environment was only moderately related to parents' education and SES
- A third of the sample showed low cognitive attainment at entry to pre-school and were classified as 'at risk' of SEN in relation to national norms. By entry to primary school, this figure had dropped to a fifth, suggesting that pre-school has a positive impact on young children's cognitive development (in both language and non-verbal skills
- Those children who had no pre-school experience were more likely to be 'at risk' of SEN in terms of their cognitive development, even taking into account this group's higher levels of multiple disadvantage. Findings thus suggest that pre-school may be an effective intervention for the reduction of SEN, especially for the most disadvantaged and vulnerable groups of young children
- Certain forms of provision were of particular benefit to children 'at risk' of SEN for different reasons. For those 'at risk' in terms of poor cognitive development, integrated centres and nursery schools were seen to be particularly beneficial. For those 'at risk' in terms of poor social behaviour, integrated centres, nursery classes and playgroups were particularly beneficial.

- Longer duration of pre-school was beneficial, with every extra month over two years of age being associated with better cognitive development

Summary: what do we know about the effectiveness of pre-school education from the EPPE project (and EYTSEN subsample)?

- Duration of attendance is important: an earlier start (under age 3) is related to better intellectual development. However, it does not appear to be important whether children attend full-time or part-time
- High quality pre-schooling is related to better intellectual and social/behavioural development for children
- Settings where staff have higher qualifications have higher quality scores, and their children make more progress
- Disadvantaged children benefit significantly from good quality pre-school experiences, especially where they mix with children from different social backgrounds
- Integrated centres (combining education and care) and nursery classes are more effective than other types of provision in promoting positive child outcomes
- The quality of the home learning environment is more important for intellectual and social development than parental occupation, education and income
- The number of months a child attended pre-school continued to have an effect on their progress throughout Key Stage 1
- High quality pre-school provision, combined with longer duration, had the strongest effect on child development
- Those children who had no pre-school experience were more likely to be 'at risk' of Special Educational Needs, even taking into account this group's higher level of multiple disadvantage
- The form of pre-school provision may be important. Children 'at risk' of poor cognitive development benefited from integrated centres and nursery schools; children 'at risk' in terms of poor social behaviour benefited from integrated centres, nursery classes and playgroups

6.3 The High/Scope Perry Pre-school Study and other evidence from the US

As children become more 'social', associating with other children in pre-school settings and then in school itself, so hyperactivity, attention deficits, aggression and other anti-social behaviour become more obvious. In objective terms, too, severe conduct problems are relatively stable and easier to identify by the age of three. There is a relatively rich seam of research concerning effective preventive interventions for this age group.

The most influential programme to date in public policy terms has been the US High/Scope Perry Preschool Study. This study has three strengths essential to a valid longitudinal experiment:

- Random assignment of study participants to a programme group and a no-programme group
- Virtually no attrition of study participants and very little missing data
- A plausible, consistent pattern of causes and effects that links the pre-school programme to childhood, adolescent and adult outcomes

The study, which began in 1962, examined the lives of 123 African Americans born in poverty in a disadvantaged area of Michigan, and at high risk of failing in school. At ages three and four, these individuals were randomly divided into a programme group (who received a good preschool programme that emphasised child-initiated learning activities) and a no-programme group, who received no preschool programme. The curriculum included five key groups of experience (creative representation; language and literacy; initiative and social relations; movement and music; logical reasoning). Children followed the programme for two years and received intensive input from highly trained workers.

The programme evaluated successfully, both in the short- and long-term, and its success has been attributed to the fact that it focused not just on improving language and literacy levels among young children, but also on enhancing their social relations, motivation and logical abilities. The follow up study of the High/Scope children as adults at age 27, in relation to controls, showed that they had:

- Significantly higher monthly earnings (29% versus 7% earned $2000 or more per month) and significantly higher proportions of home ownership (36% versus 13%)
- A significantly higher level of schooling completed (71% versus 54% completed 12th grade or higher)
- A significantly lower percentage receiving social services at some time in the last 10 years (59% versus 80%)
- Fewer arrests in relation to crimes of drug taking or drug dealing (7% versus 35% with five or more arrests) (Schweinhart, 2000)

Cost-benefit analysis has shown that the pre-school programme was a worthwhile investment to society, with a return of $7.16 on every dollar spent. (For discussion of the cost-effectiveness of the Perry programme, see Chapter Eight.)

A few studies have produced evidence of long-term effects similar to the Perry programme (reduced criminality, increased high school graduation) but the results still do not match the achievements of children from better-off homes with no pre-school intervention programme, suggesting the need for a more comprehensive policy programme to reduce the range of socio-economic equalities.

The Seattle Social Development Project successfully combined training to improve children's social competence and thinking skills with a parenting programme and a classroom management programme for teachers. This 'multimodal' programme was sustained over six years of primary education with changing components as the children grew older. Promising long-term outcomes, measured at age 18, included less violent, criminal behaviour and less heavy drinking than a control group, as well as stronger attachment and commitment to school. However, there was no significant difference between the intervention and control groups in the reported use of cannabis or heavy smoking The Seattle researchers highlighted the finding that a 'late intervention' programme did not produce the significant long-term effects achieved by the full interventions (Hawkins et al, 1999).

Other rigorous US studies provide further evidence (Currie, 2000). The Early Training Project, the Carolina Abcderian Project and the Milwaukee Project all found positive effects on school and college attainment. Each project varied in the degree to which it involved parents, the age at which children started and the curriculum content. However, the conclusions reached are broadly the same: there is little lasting improvement in IQ (except in the Abcderian programme, which started when children were only 4 months old), but a

noticeable improvement in social skills and behaviour. Over time, motivation and social skills reduce the impact on criminal justice services and improve health and job market performance.

In each of the above examples, a set of model conditions exists in programme delivery and research rigour. Overall, the number of children involved is small and what works for a small group might not translate well to a larger setting. In addition, the model programmes were generally staffed by people who were highly trained and motivated to show that their particular intervention worked. The programmes all come from the US and it is not clear whether they would transfer to the Scottish context. Finally, although all the programmes operated in deprived areas, it is not clear whether outcomes for the most disadvantaged children were as encouraging as for those with fewer risk factors.

The Promoting Alternative Thinking Strategies (PATHS) programme (Greenberg et al, 1998) is an example of a strongly evaluated curriculum used in countries across the world (including UK primary schools) to promote social competence, self-control and problem-solving, and to reduce aggression and problem behaviours. PATHS lessons include instruction in identifying, labelling and expressing feelings; assessing the intensity of – and managing – feelings; understanding the difference between feelings and behaviours; controlling impulses and understanding the perspectives of others. PATHS has been shown to improve protective factors and reduce behavioural risk across a wide variety of elementary school-aged children. Findings have shown cross-rater validity as they have been true of teacher reports, self-reports, as well as child testing and interviewing. A critical component to these findings is the use of well-matched control groups; this is critical because all children tend to improve as they develop, and thus programmes may only look effective due to general developmental progress.

These programmes provide evidence that, through enrichment in the early years, children from disadvantaged backgrounds can be given a good start in life – a start that endures, even if there is some fade out, thanks to improved social skills and motivation.

Summary: what do we know about the effectiveness of pre-school education from the High/Scope Perry Pre-school Study and similar projects in the US?

- The High/Scope Perry Pre-school Program is the best known and most influential of all preventative programmes. It has been the subject of high quality evaluation and is unique in following up child participants, not only to adulthood, but to middle age
- Children received a programme that included five key groups of experience, followed the curriculum for two years and received intensive input from highly trained workers
- The programme evaluated successfully (in the short- and long-term) and its success is likely to be due to the broad focus of the curriculum, which included the enhancement of social relations, motivation and logical abilities, in addition to improving language and literacy levels
- The programme has been shown to be cost-effective: the major cost is the initial investment, while the major benefits are reduced costs of education, increased earnings, and decreased costs of welfare assistance and crime
- Other US studies which have received rigorous evaluation have found positive effects on school and college attainment. Although there were variations in the implementation of key aspects of the interventions, over time participants' motivation and social skills reduced the impact on criminal justice services and improved health and job market performance

- Evaluation of the Seattle Social Development Project, which combined training to improve children's social competence and thinking skills with a parenting programme and classroom management programme for teachers (with promising long-term outcomes) highlighted the finding that a 'late intervention' programme did not produce the significant long-term effects achieved by the full intervention
- However, it is not clear whether outcomes for the most disadvantaged children matched those with fewer risk factors, and it is not known whether these programmes would be transferable to the Scottish context
- The PATHS programme is an example of a strongly evaluated curriculum used in elementary schools in countries across the world, and in the UK, to promote social competence, self-control and problem-solving, and to reduce aggression and problem behaviours. The programme has been shown to improve protective factors and reduce behavioural risk across a wide variety of young schoolchildren.

6.4 Systematic review of day care

Childcare enables parents, particularly mothers, to go out to work, or increase their working hours, thereby potentially contributing to efforts to lift their families out of poverty. A systematic review of day care for pre-school children in disadvantaged populations reported positive effects on mothers' education, employment and interaction with children (as well as an increase in children's IQ and beneficial effects on behavioural development and school achievement. Long-term follow up demonstrated increased employment, lower teenage pregnancy rates, higher socio-economic status and decreased criminal behaviour (Zoritch et al, 2000).

However, most of the trials combined non-parental day care with some element of parent training or education (mostly targeted at mothers) and failed to disentangle the possible effects of these two interventions, among other methodological weaknesses. In addition, all the contributory studies were conducted in the US, so the transferability of findings to the Scottish context is uncertain.

CHAPTER SEVEN THE EFFECTIVENESS OF INITIATIVES TARGETING VULNERABLE GROUPS

7.1 Introduction

Families facing the disadvantages associated with poor housing conditions, low income, unemployment or/and a lack of supportive relationships are vulnerable to a range of additional stresses, such as homelessness, and alcohol and drugs misuse. Earlier chapters in this document have noted initiatives specifically targeting, or including, groups experiencing a range of risk factors; however, it is important to include a focus on evidence relating specifically to those who are particularly vulnerable. This is not intended to be a comprehensive investigation of all such groups, but to flag up some examples and indicate what is known, or where work is in progress. The actual groups and issues covered in sections 7.3-7.6 were suggested by colleagues who contributed to the paper. The review of services in section 7.2 includes the perspectives and circumstances of families from additional risk groups, although it has not been possible to separate out individual experiences.

7.2 A review of services for vulnerable families with very young children

A review of local authority and health services to support vulnerable families with children aged 0-3 years was carried out in Scotland during 2000-2001 (Scottish Executive, 2003). The review was conducted by a team led by the Social Work Services Inspectorate and including HMI Education and health professionals. Fieldwork was carried out in five local authority areas chosen to reflect the range of demography, geography and service provision in Scotland. Although the review is now several years old, findings are still likely to be relevant.

The review examined the case records of 147 families with children aged 3 and under in touch with social work services. The majority of these families were experiencing profound and acute stresses:

- 39% of families had been the subject of child protection enquiries
- 37% of the index children were, or had been, named on the Child Protection Register
- 9% of the index children had been looked after in local authority accommodation
- 16% of the cases involved young mothers who had been accommodated by the local authority just before or during a pregnancy and were now parents of young children
- at the time of the review, the index child was looked after by the local authority in over a third of the sample cases
- 54% of the families were headed by a lone parent
- Almost one in five of the families were affected by mental illness and a similar proportion included a history of drug dependency or alcohol abuse
- In over a quarter of families there was a history of domestic abuse

7.2.1 What support do families receive?

The review found an extensive range of services offering practical help, information, parenting education and advice, and emotional support to parents in difficulty in each area.

The bulk of antenatal care and support was provided by ***midwives,*** most of whom perceived themselves as offering the same service to all new parents, regardless of specific risk factors. There was broad agreement about the range of factors which make particular groups of mothers and children at increased risk of early problems with care and bonding. Often these were associated with poorer take up of midwives' advice and support. Midwives working in areas of multiple disadvantage were more confident than colleagues in more affluent areas about combining support for parents with assessment of potential risk to their baby.

The ***health visitor*** was the key contact with health services. Most families had a designated health visitor, although levels of contact varied widely from weekly to very limited contact. Health visitors undertook surveillance of young children's growth and development and provided emotional support for mothers. Health visitors were in close contact with local child care resources and provided early referral to day care services when they perceived parents to be under stress. However, health visitors did not have a clear sense of their responsibilities towards vulnerable families, and practice varied widely.

The majority of health care was reactive: preventative work was focused on universal health surveillance and general health promotion advice, taking little account of the difficulties that vulnerable families may have in following advice offered.

Most contact with ***other health services*** centred around diagnosis and treatment of the individual patient. Specialist services rarely considered the family's wider circumstances unless there was evidence of immediate risk to a child.

Most of the families had an allocated ***social worker*** working with them. Social workers carried out assessments of families' situations and made referrals to other services, such as family or child care centres. There was little emphasis on social workers' direct work with families or counselling for parents, although there were examples of this being offered or arranged in more complex cases. Local authorities also provided families with material and financial help.

Many social workers made good use of specialist services (such as local child and adolescent mental health services and specialist substance misuse services). They also kept in touch with others services, particularly housing and benefits agencies, but there were lengthy delays in access to specialist services for families.

Family support workers offered practical advice and support to parents and sometimes offered respite by looking after children. These staff also played a part in monitoring children's development.

Out of hours or emergency services played a key part in dealing with crisis referrals. They experienced constraints and difficulties in working when other services and resources were unavailable, and often had no alternative but to spend time talking directly to families to understand their immediate circumstances and problems. Rural authorities have particular challenges in providing out of hours services across large areas. Out of hours staff were skilled and experienced and gathered a great deal of information and offered good professional insights into the supports needed. This contact was important in setting the context for families' further contact with daytime services.

Family centres brought together a range of practical, material and emotional supports for parents, usually underpinned by some form of child care. Some families had received constant support from their local family centre over a number of years and family centres seemed able to engage even isolated and unwilling parents well.

Voluntary sector support included home visiting services; parents' support groups; child care and play sessions; advice, advocacy and emotional support for young homeless people or people leaving local authority care; and specialist assessment of families with complex needs for the local authority.

Children with physical or learning disabilities or sensory impairment were managed poorly. There were lengthy delays in responding to referrals, making decisions and between contacts. The impact of the disability on the family as a whole was not taken into account in planning, and carers' needs were not consistently assessed.

The review also found that, unless there was an inter-agency child protection plan or supervision plan in place, support for families was poorly coordinated. All agencies agreed there was a need for better communication between services, but saw this as a need for change in systems of communication rather than changing their own practice.

7.2.2 How well do services meet the needs of these families and how far do they improve outcomes for children in need?

In more than half of the cases reviewed where there were concerns about children's safety, development or welfare, local authority social work involvement brought about some immediate improvement. Fears expressed by both families and professionals that social work departments were likely to permanently remove children from their parents' care were not reflected in reality. Local authorities went to great lengths to support parents in looking after their children at home. However, all professionals found it hard to judge what should be the threshold for removing children from their parents' care. Both health and social work services allowed children's care to drift below adequate standards for unacceptably long periods before taking protective action. The local authority's efforts to reunite the family also meant that insufficient attention was given to planning for the child in the event that the parents remained unable to fulfil their parental responsibilities.

In general, families had very negative perceptions of field social workers, which hindered them from seeking early help from social work services. However, families with experience of support from field social workers were more objective and realistic about the support available and valued contact with social workers. Referral and allocation procedures were not helpful in promoting an ethos of partnership with families.

Agencies relied too much on local policy or guidelines to direct professionals' decision making. These were applied regardless of evidence that indicated alternative options were more likely to safeguard and promote a child's welfare. However, the quality of social work practice and intervention was judged to be satisfactory or better in 64% of the cases examined.

Families reported that the services and support offered by local authority which they found particularly helpful were: child care provided by childminders, nurseries and family centres,

and home visiting by home support workers. These services effectively provided respite and support for the most vulnerable families under stress.

In relation to health services, parents were most positive about professionals who took time to discuss their problems and were honest about the help they could provide, even if that was limited. Health visitors were seen as potential sources of support: they compensated for deficiencies in information provided by doctors, offered clear and simple explanations of health problems and treatments and gave practical help on health problems.

Almost all parents were very positive about the support they received from family centres. They particularly valued the respite afforded by family centres, the emotional support they received, and advice and social support from peers.

Parents argued that there was a need for more places, more staff and more support for themselves in child care provision. They wanted staff who could deal with specific special needs and were trained in specific issues such as learning how to play with children, dealing with disability, racism and resultant inequalities, and managing children's difficult and challenging behaviour.

Many parents had attended group work programmes in their local family centre or equivalent. The nature of these groups varied: some were parents' support groups with the agenda and activities set by parents themselves with help and practical support provided by a group worker; others were a set series of sessions bringing people with similar problems or stresses together to discuss how to solve these, or for educational programmes. People generally said that they found group work very helpful, especially when this included crèche facilities. They offered 'a bit of space' and the chance to meet people in the same situation.

Parents described the most helpful characteristics of group work as:

- the knowledge that you are not alone in your predicament;
- hearing others' experience and advice about what works;
- having other adults to talk to;
- knowing that the group will keep your business confidential;
- having interesting and different things to do, and 'getting out of the house'; and
- leaving your responsibilities behind.

Parents also identified common gaps in group work. They felt that their children could also benefit from groups, but that there seemed little available for younger children independently of adults. Most services demanded that parents were also present (such as mother and toddler groups and playgroups). There was little provision for fathers, especially single fathers, most groups being oriented towards women.

Parents observed their child acquiring skills and therefore saw the centres as providing measurable support for themselves and their child and were more open to advice from staff whom they perceived as having experience and expertise. Moreover, family centres provided an opportunity to see how centre staff interacted with their children and encouraged learning and development and good behaviour. Parents described their children as being much better behaved at the family centre and this being generalised when they returned home.

Parents felt less threatened by the fear of their child's removal in family or child care centres. Most parents knew that staff contributed to assessments and would report any concerns about a child, or a parent's interaction with their child to their social worker. But they saw social workers or senior staff as responsible for decisions about registration, changing plans or removal of a child from their care. They felt that centre staff were more readily available and had more time to listen to them and treated them as an individual in their own right rather than merely a parent of a child. The routines they picked up in the centre helped them institute routines at home too.

Both families and professionals found family centres offered great benefit but highlighted gaps in support, for example at evenings and weekends.

The service review provides a useful insight to the interaction between families and a range of services and service professionals. It is clear that parents particularly valued services which they felt supported them and their children in an unthreatening way and provided help and information in an informal setting. They felt such services should be expanded and be available out of office hours.

It is, perhaps, surprising that the section of the review which lists the health services with which families were in contact did not include GPs, bearing in mind that GPs have contact with almost all infants under the age of three. One issue is that few parents in the sample had a consistent relationship with a named GP and contacts were often hurried and unsatisfactory. It is noted in the report that parents felt GPs were too ready to prescribe tablets and unwilling to take time to listen to their problems and worries. It is not clear from the report whether this was the view of the majority but, if so, it may be that parents have unrealistic expectations of pressurised GP services. Nevertheless, a need is being expressed and the report makes it clear that parents in the sample valued service professionals who were prepared to listen, explain information and take time to understand problems.

The findings of this review informed the work of the Action Team on integrated services for children. Weblink to final report:
http://www.scotland.gov.uk/Resource/Doc/47021/0025617.pdf

Summary: what does the review tell us about local authority and health services supporting vulnerable families?

- A wide range of services was offering support to families, but support was poorly coordinated unless there was an inter-agency child protection plan or supervision plan in place
- The health professionals providing the bulk of antenatal care and support either did not have a clear sense of their responsibilities to vulnerable families, or perceived themselves as offering the same service to all new parents, regardless of risk factors
- Families and professionals feared that social work departments would permanently remove children from their parents' care, although this was not reflected in reality
- Negative perceptions of field social workers hindered families from seeking early help from social work services, but families with experience of support were more objective and realistic
- Parents valued health professionals who took time to discuss problems and were honest about the help they could offer – health visitors were particularly appreciated for the practical support and advice they provided
- Parents were very positive about the support they received from family centres,

particularly valuing respite, emotional support and advice and social support from peers

- Family centres provided safe environments for parents to acquire skills, build trusting relationships with staff and watch staff interacting with children. Parents wanted better information on a range of topics, and additional support at evenings and weekends
- Few parents had a consistent relationship with a named GP and contacts with GPs were described as hurried. Parents felt that GPs were too ready to prescribe tablets and unwilling to take time to listen to their problems and worries
- Parents in the sample valued service professionals who were prepared to listen, explain information and take time to understand problems.

7.3 People who are homeless, or at risk of becoming homeless

Housing has been a relatively neglected area in health inequalities research, although the strong relationship between homelessness and health is widely accepted. Poor health (physical and mental) can cause homelessness, through loss of employment and consequent difficulties meeting housing costs. In addition, homelessness can exacerbate risks to health, with problems associated with substance misuse becoming more pronounced and greater exposure to accident, injury and attack (Asthana and Halliday, 2006).

The number of people recorded as sleeping rough in Scotland is relatively low (328 in October 2003) (Thomson, 2005). However, when households staying in night shelters, low budget hotels and hostels, women's refuges, temporary structures, and with friends, are added to the equation, it becomes clear that a number of vulnerable adults who are/may become parents and young children are living in accommodation inappropriate to their needs. In Glasgow alone, in December 2004, 1624 households were living in hostel accommodation (Thomson, 2005).

Many people at risk of homelessness lack the knowledge and skills required to manage a tenancy and the self-confidence and interpersonal skills necessary to communicate with agencies and develop social networks. Young people, care leavers, ex-offenders, ex-service personnel, people with low educational achievement and literacy problems are particularly vulnerable.

A research project by Scottish Homes aimed to identify the range of life skills training provision available in Scotland, to examine evidence on the role of life skills training in resettlement and tenancy sustainment. Findings included the following:

- There is limited knowledge on the resettlement needs of many people, such as families, people from black and minority ethnic groups, and women.
- Life skills training appears to be well embedded in homelessness provision. The majority of projects were targeted solely at young people. There were wide variations in the length of time that life skills training was provided to clients
- None of the projects surveyed submitted details of formal service evaluations
- There is very little evidence of the effectiveness of life skills training as part of the resettlement and tenancy sustainment process
- There is a need for further research if effective services to prevent repeat homelessness are to be developed (Scottish Homes, 2001)

Evidence from Scotland: The Dundee Families Project

- The project, run by NCH Action for Children Scotland, provides services for families who are, or who are at risk of becoming, homeless due to anti-social behaviour. A range of services are offered through: individual and couple counselling, family support and group work. The three main service types are:
  - Outreach: a preventive service offered to families in their existing homes
  - Dispersed tenancies
  - Core: temporary accommodation offered to the most needy families in a residential block for up to four families

- An evaluation was carried out by Glasgow University (Dillane et al, 2001). Key findings:
  - The project worked with 126 families in 4 years (1996-2000)
  - Council information on closed cases showed that the majority of families made good progress, particularly regarding housing issues; however, many still had serious childcare problems
  - Lower percentage of outreach services were successful (56%) compared to dispersed (82%) and core (83%)
  - The majority of respondents felt that a core small residential block was helpful in providing intensive support to families, although a few questioned the need for this
  - Parents and children were very positive about the service. Adults identified major changes in their housing situation, facilities for children, positive changes in family relationships and behaviour. Children thought the staff were helpful and their housing situation improved. They identified improvements both in their own and in their parents' behaviour
  - Evidence suggests that the project generates real cost savings, through stabilising families' housing situation, avoiding costs associated with eviction, homelessness administration and rehousing; and, in some cases, preventing the need for children to be placed in foster or residential care
  - Crucial ingredients were: good management, stable staff, shared ownership by other agencies, and a holistic approach.

Weblink to summary of final report:
http://www.scotland.gov.uk/Resource/Doc/157971/0042705.pdf

7.4 Misuse of alcohol and other drugs

Over the past few years, there has been growing concern about the potential impact of adult problem drug and alcohol use upon children. Tobacco use has declined in recent years (the Scottish Health Survey 2003 reported a decrease in the percentage of male smokers from 34% in 1995 to 32% in 2003 and a decrease in females from 36% to 31% over the same period, along with a 4% increase in the percentage of both males and females not exposed to other people's smoke). However, alcohol consumption has been increasing (particularly among women and young people generally) and the misuse of a number of other psycho active drugs (such as cannabis, heroin, cocaine, benzodiazepines, amphetamines and solvents) has become much more widespread (NHS Scotland, 2007).

Hidden Harm, published in 2003 by the UK's Advisory Council on the Misuse of Drugs (ACMD), estimates that there are up to 60,000 children under 16 years old in Scotland who

have a parent with a drug problem (approximately 5% of the total population group for this age). Further estimates indicate that 10,000-20,000 children live with a drug-using parent, while the number of babies born to drug-misusing mothers rose to nearly 18 per 1,000 in 2000 (*It's Everyone's Job to Make Sure I'm Alright,* 2002). *Hidden Harm* also reports that, on average, 25% of children on child protection registers were there because of parental alcohol or drug use.

In the first sweep of the '*Growing Up in Scotland*' survey, there was little variation in the average number of units of alcohol consumed, by area deprivation. However, respondents in more deprived areas were significantly more likely to say they drank five or more units on one occasion than those in less deprived areas. Reported illicit drug use was also patterned by disadvantage: mothers with no educational qualifications, mothers in the lowest income quintile and those in households in routine and semi-routine occupational groups were the most likely to say they had ever taken drugs. Younger mothers and lone parents were more likely to take drugs than older mothers and those in couple families (Anderson et al, 2007).

Hidden Harm highlighted the plight of children affected by parental drug use. The (then) Scottish Executive responded to the *Hidden Harm* report, covering not only the issues identified in the ACMD report about parental drug use and its impact on children, but also those related to parents with alcohol problems (Scottish Executive, 2004). *Hidden Harm – Next Steps*, (Scottish Executive, 2006a) set out a wide-ranging plan of action to make significant improvements to the lives of children in substances misusing households. The new Scottish Government has aligned the *Hidden Harm* programme with its early intervention agenda, ensuring a focus on prevention and capacity building, while strengthening the protection and wellbeing of children at risk. Every aspect of the agenda relating to children affected by substance misuse will draw on the principles and practice of *Getting it Right for Every Child,* contributing to three high level outcomes around information sharing, removing barriers and practice change (Scottish Executive, 2006b). The Scottish Government Drugs Strategy notes that an evidence base is to be developed in relation to approaches to intensive family support, and evaluation measures will be proposed for work across the range of priorities under the new agenda.

A scoping review commissioned by the (then) Scottish Executive (Scottish Executive, 2006c) aimed (as part of its remit) to collate knowledge and evidence on effective practice to address the issue of parental substance misuse. The review concluded that there is growing evidence that a range of services and interventions for children and families is developing, but there is a need for continued expansion of such responses, and for their rigorous evaluation. In addition, studies which were able to demonstrate their effectiveness at improving children's risk and protective factors and behaviours were not able to clarify which resilience factors determine positive outcomes. The review identified key gaps in the literature, including:

- Children's views (particularly in relation to impact, resilience factors, service needs, or views on existing service provision)
- A need to view parental substance misuse as part of a far wider, multi-dimensional picture

7.5 Children at risk of neglect or acting beyond the control of their parents

Local authorities are required to safeguard and promote the welfare of children in need and promote the upbringing of such children by their families, through the provision of a range of

appropriate level of services (The Children (Scotland) Act 1995). As part of the evaluation of the implementation of Parenting Orders in Scotland, a literature review was conducted which re-examined the policy context to locate the rationale for the introduction of Parenting Orders, the evidence of risk and protective factors and inter-related issues of anti-social behaviour and child care, alongside effective approaches to family service provision (Curran et al., 2007 – unpublished paper). Many of the main findings from the literature review have been highlighted in earlier chapters of this document, but the following section summarises the key messages that relate to this specific group.

Risk and protective factors for potential neglect are known to be similar to the known risk factors for potential disruptive behaviour. While the overlap between factors associated with anti-social behaviour and criminal activity and disadvantage and neglect are well established, evidence on the precise mechanisms of the inter-relationship between anti-social behaviour, neglect and abuse remains limited. Much of the published material is from the US, although there is a growing body of UK research (e.g. McCarthy et al., 2004). Research on resilience in children has documented a lengthy list of characteristics associated with positive outcomes. When children are helped to succeed, the most important influences are likely to be members of extended families, informal networks and positive peer association. Family factors such as parenting style, poor parental supervision, harsh and inconsistent discipline, parental conflict and parental rejection are associated with youth offending and anti-social behaviour. Evidence of early onset can emerge by the age of 3 and manifest by pre-school and school entry in isolation, poor achievement and difficult behaviour, consolidating through peer association in anti-social behaviour.

The successful engagement of parents and families is regarded as the cornerstone of success of support services and programmes in achieving desirable outcomes. However, the process of engagement can go awry and, although service provision is adequate and fit for purpose, more needs to be done to bolster practitioners' and strategists' attempts to resolve this issue. In Scotland, compulsory mechanisms for parents have been introduced in the form of Parenting Orders, provided for in Part 9 of the Antisocial Behaviour (Scotland) Act 2004. A 3 year National Pilot of Parenting Orders was launched in April 2005. Mechanisms were put in place to allow local authorities and the Scottish Children's Reporter Administration to apply to the Sheriff Courts for Parenting Orders with respect to parents failing to engage voluntarily with support services. The Parenting Order is intended as a last resort measure for the 'small minority' of parents who are unwilling to accept help in fulfilling their parental responsibilities when a clear need for support has been identified. However, the Parenting Order Legislation has attracted harsh criticism for the following reasons:

- Apparent conflict with existing practice philosophies in Scotland (with their focus on inclusive and voluntary intervention)
- Parenting Orders are likely to be stigmatising and reliant on inadequate pathological assumptions regarding the causes of offending and family dysfunction
- To apply punitive sanctions to parents failing to engage is heavy handed and unjust

Little use of Parenting Orders has been made in Scotland to date, so there is no empirical evidence to support the negative claims made against them or to support their use. In England and Wales, where the legislation has been in place since 2000, studies which included an examination of Parenting Orders practices expressed concerns about the disproportionate focus of the Orders on mothers, and on the high levels of need among the families in question. Nonetheless, they identified a degree of success in terms of impact on attendance. Studies also found that families had histories of unsatisfactory contact with

support agencies prior to referral for a Parenting Order. This raises questions as to whether, if such families had had access to such support before, they would have required the compulsory measure at all.

7.6 Looked after children

One of the most powerful predictors of social exclusion in adult life is the experience of being in care. There is a well-established link between deprivation and children coming into care: factors such as unemployment, low income, inadequate accommodation and lone-parent status are likely to threaten the stability of family life (Asthana and Halliday). All children who are looked after have experienced the trauma of being separated from their birth parents. Many have also experienced neglect, abuse, rejection and the early effects on their development of parental substance misuse.

The number of looked after children in Scotland varies all the time, as children start and stop being looked after. On 31 March 2005, 12,185 children were being looked after by local authorities: 1.1% of all children and young people in Scotland. The number of very young children who were looked after increased during the year 2004-05 (a 15% increase in the numbers of boys aged 0-4 years and a 7% increase for girls in the same age range). In 2005 the number of very young children who were looked after was 0.5% of the child population of Scotland (Social Work Inspection Agency, 2006). (On 31 March 2006, the total number of looked after children and young people was 12,966 (Scottish Executive, 2007).)

A survey carried out in 2002-03 by the Office of National Statistics (Meltzer et al., 2004) found that, among young people (aged 5-17 years) looked after by local authorities in Scotland, 45% were assessed as having a mental disorder: 38% had clinically significant conduct disorders; 16% were assessed as having emotional disorders; and 10% were rates as hyperactive. Two thirds of all looked after children were reported to have at least one physical complaint. Approximately one third had officially recognised special educational needs. In relation to lifestyle behaviours, 44% of children aged 11-17 years reported they were current smokers; 39% had used cannabis at some point in their lives and 25% drank alcohol at least once a month. Twelve percent of children who reported drinking alcohol also said they had started doing so at the age of 10, or younger. Around a third of young people (aged 11-17) reported they had had sexual intercourse and 17% had experienced sexual abuse or rape

Only 1% of all looked after children go on to university, compared with 50% of the general population; 46% of young women and 59% of young men leave school without any qualifications (BAAF and TFN 2005). Frequent movement within the care system, school exclusion and non-attendance have all been linked to educational under-achievement (Asthana and Halliday). Some estimates suggest that children in care are ten times more likely to be excluded than those outside the care system (Brodie, 2000; Goddard, 2000).

The poor educational participation and performance of looked after children has become a focus of policy concern, not least because educational disadvantage leads to disadvantage in other areas, ultimately reducing the opportunities available to successive generations. The Scottish Government has reinforced the commitment made by the previous administration to work towards improving outcomes for all children who are looked after, and to support those who care for them (Scottish Government, 2007; Scottish Executive, 2007). Evidence of

effective interventions to support looked after children (both during childhood and early adulthood, when they are particularly vulnerable to early and unplanned parenthood) is sparse. However, it is known that:

- Placement stability and encouragement of carers is important for achieving educational success.
- Education and employment prospects after the age of 16 can be improved by careful assessment of each young person's capabilities and by working with them to increase their employability (Curtis and Roberts, date unknown).

Findings from two recent research projects in Scotland reinforce these messages.

Evidence from Scotland: extraordinary lives

- A major review (Social Work Inspectorate Agency, 2006) aimed to demonstrate what good care for children and young people looked after by local authorities looks like
- A number of methods were used to synthesise data: consultation with 200 young people and adults; examples of good practice; reviews of policy; examination of government report (1964-2006); exploration of findings from research; the experiences of 32 young people
- The review has six key messages:
  - Looked after children can overcome adversity in childhood and lead successful adult lives
  - Too many adults have low expectations of what looked after children can achieve
  - Relationships with skilled adults can help looked after children develop successfully
  - Children being looked after away from home need stability and the chance to put down roots
  - Tackling the disadvantage and discrimination still experienced by many looked after children requires planning at every level in a local authority, and between them and their partners in delivering children's services
  - Developing an understanding of what children and young people think about services intended to help them supports effective engagement and long-term service planning

Evidence from Scotland: celebrating success

- A small qualitative research project (Happer et al., 2006) aimed to focus on what helped young people who have been looked after to become and feel successful
- Interviews were carried out with 30 adults and young people
- Five factors emerged as critical to the success of the study participants:
  - Having people who care about you
  - Experiencing stability
  - Being given high expectations
  - Receiving encouragement and support
  - Being able to participate and achieve
- The study focused on a small, selected group. While it is important to learn from their experiences, it cannot be assumed that replicating their experiences would automatically lead to improved outcomes for every child who is looked after

The Quality Protects Initiatives offer a way to start to monitor and improve the looked after experience for children. The website offers a Good Practice section, although the interventions described have not been evaluated:
http://www.doh.gov.uk/qualityprotects/gp_db/index.htm

It should be noted that most of the initiatives to avert pregnancy at a young age (discussed in Chapter Two) will be particularly relevant to young people who are, or have been, in the care system.

Summary: what do we know about the effectiveness of interventions targeting particular vulnerable groups?

- The evidence base is currently thin in relation to initiatives targeting families who are (or are at risk of becoming) homeless, people who misuse drugs and alcohol and young people who are, or have been looked after. However there are some promising initiatives in Scotland that have undergone evaluation
- The Dundee Families Project provides a range of services for families who are, or who are at risk of becoming, homeless. The initiative is appreciated by parents and children and, when implemented as intended by a stable staffing structure, generates real cost savings
- In relation to supporting looked after children, the evidence suggests that placement stability and the encouragement of carers is important for achieving educational success. Education and employment prospects after the age of 16 can be improved by careful assessment of each young person's capabilities and by working with them to increase their employability. In Scotland, these messages are reinforced by findings from a recent major review and a qualitative research project
- The case for using compulsory measures to engage parents who are unwilling to accept help to fulfil their responsibilities remains unproven. Parenting Orders have been the subject of harsh criticism and have been little used in Scotland to date
- Outcomes of initiatives highlighted throughout this report which target high risk groups as an adjunct to universal provision are likely to be useful to service planners and policy makers
- Messages from the review of services for vulnerable families discussed earlier in the chapter are also relevant

CHAPTER EIGHT INVESTMENT IN THE EARLY YEARS – COSTS AND BENEFITS

8.1 Introduction

There is no shortage of interventions designed to address problems which have a disproportionate impact on the most disadvantaged families in society during the earliest years of a child's life. The earlier chapters of this document have highlighted a range of these. Many initiatives have been the subject of rigorous evaluation (whether or not this has yet been in the UK) and have shown good outcomes in the short-term; others appear promising, based on the evidence to date. However, information on the cost of individual interventions, factors affecting cost, and the longer-term impact of investing in the early years is extremely sparse. This chapter highlights work that has examined the financial implications of moving from a focus on those with the most complex needs to earlier, more integrated intervention. It then (briefly) examines the evidence base on long-term outcomes and returns on investment, and attempts to identify the major gaps.

This chapter also looks at the issue of creating and fostering non-violence in society, since violent crime currently costs the UK more than £21 billion per annum (Hosking and Walsh, 2005). This is particularly relevant to the inequalities agenda, since violence is triggered in high propensity people by exposure to a range of adverse social conditions and so investment in inhibiting the development of propensity to violence is of vital importance.

8.2 The 'spiral of decline'

In deprived areas of Scotland, many children's prospects are damaged by an accumulation of risk factors, each one making it increasingly unlikely that the child will be able to fulfil his or her potential in later life. Reducing health inequalities in the long-term means taking an intergenerational perspective, as discussed in the earlier chapters of this document and a broad overview of the costs and benefits of interventions over a number of years.

Figure 8.1 (below), which is taken from the Chief Medical Officer's annual report (NHS Scotland, 2005), provides a useful illustration of how health, behavioural and social risk factors can combine and negatively impact on child health and wellbeing, potentially requiring a number of different service responses (from a range of agencies). Figure 8.1 also illustrates the importance of intervening at the early stages of a problem's development, or even before the problem is identified (supporting pregnant women to make healthy choices in terms of lifestyle and nutrition during pregnancy, for example) in order to increase the opportunities of the pre-school child.

Figure 8.1: 'Spiral of decline' in the potential of a pre-school child suffering multiple deprivation

8.3 Costs and outcomes in services for children in need

Services for children depend, and will continue to depend, on a limited supply of resources, so it is vital that available resources are used well. The English Government recently commissioned a programme of research on Costs and Outcomes in Services for Children in Need, in which each of 14 studies included an economic component that attempted to describe the way resources were used, or to link costs to the results achieved. The focus was broader than the early years, but the studies included health visiting, therapeutic family support and Home-Start (see Chapter Four). Findings were drawn together into an overview report, aimed at helping commissioners and managers by illustrating the possible impacts of their decisions to spend money in particular ways (Department for Education and Skills, 2007, summarising Beecham and Sinclair, 2007[10]).

The importance of taking a long-term approach to decisions on spending and planning is acknowledged: shifting resources from the small group with the most complex needs to earlier and more integrated intervention is unlikely to save money in the short-term, and may increase pressure on resources as more children in the earlier stages of need are identified.

Based on the 14 studies, the authors conclude that the most rational approach to decision-making is likely to depend on:

- *Understanding the current position:*
  - Analysing variations in how local authorities and their partner agencies use resources
  - Undertaking an audit of children and young people in the highest-cost placements
  - Analysing the performance of different services in terms of meeting needs, cost and quality
- *Planning and designing services:*
  - Shifting resources from 'heavy-end' higher-cost services that currently absorb most resources and often do not lead to positive outcomes
- *Linking costs and outcomes:*
  - Using the resources released to develop the kind of services that currently seem to have the best chances of success (e.g. services with a clear rationale targeted on 'high risk' children who are at a turning point or transition in their lives (such as birth or first entry to school)
- *Improving information about what works:*
  - Actively supporting research and other ways of increasing our knowledge of what works
  - Agencies monitoring and evaluating the impact and cost of services they provide

The summary includes a section on what the research says about what works. Findings from the 14 research studies appear to be consistent with what is already known from evaluations of early intervention services, i.e.:

- Tightly controlled interventions with a clear rationale tend to have better outcomes than less strictly controlled 'standard' interventions
- It is easier to improve outcomes with younger children than with older ones

The authors conclude that the evidence base is much stronger for specialist programmes (usually targeted work with vulnerable families – for example intensive home visiting) than

[10] For the purposes of this document, I have relied on the summary version

on universal family support services which promote general wellbeing (such as Home-Start), although universal services that have been evaluated appear to be both relatively low cost and very well received.

8.4 0-5: How Small Children Make a Big Difference

One recent paper to address the long-term impacts of focusing resources on issues of parenting and care is *0-5: How Small Children make a Big Difference* (Sinclair, 2007). The recommendations made by the paper are sweeping and do not seem to be particularly helpful, but the main messages are useful.

Early engagement pays a very high rate of return. Growth modelling on early years investment by the Brooking Institute led to the conclusion that, in the USA 'using reasonable assumptions, we project that GDP would be $988 billion larger within 60 years' (Dickens et al, 2006).

Sinclair's key message is that the most important six years of a person's life are up to the age of five, a position highlighted by the 'spiral of decline' at the start of this chapter. If in the first 3 years of a child's life there is sensitive care, children will feel better in themselves, be more resilient and appreciate other people's feelings. Families and not schools are the major contributors to inequality in student performance. Remedial work for young people from an impoverished environment becomes progressively more costly the later it is attempted.

As yet, no one has modelled the dynamic and complex factors that would affect growth in the UK. However, investment would promote economic growth by creating a more able workforce and, ultimately, reduce the costs borne by criminal justice, health and welfare systems. Sinclair's vision sees costs rising for screening and support services during pregnancy through to parenting and enrichment for children from 0 to 5, and again at 16-18 as more young people stay on at school. However, attainment in education would start improving from primary year one, with children arriving at school with better behaviour, motivation and language.

Cost savings would start to kick in at around age 12, when the first savings would be to the criminal justice system. Health savings would start to be realised in the teenage years, with first pregnancies occurring later and fewer costs associated with drug and alcohol misuse. From 18 onwards, more people would be in work and there would be a fall in the number of young people not in education, employment or training. Tax payments would increase and there would be less demand on benefits.

In the US a series of studies targeted at higher risk families followed up over time have estimated a payback of between 3 and 7 times the original investment by the time the young person reaches the age of 21. The most well known is the Perry Preschool project (see Chapter Six) where groups have been followed up regularly, most recently at 40 years old. The programme measured major benefits to the criminal justice system, health, educational attainment, employment and income levels, reduced dependency on welfare, lower levels of drugs misuse. Programme participants were also more likely to be raising their own children and to be getting along very well with their families. By the time the participants reached the age of 40, the return was estimated to be $17 on each dollar originally spent (Schweinhart, (in press).

8.5 The costs and benefits of early intervention

Analyses of data from the Perry Preschool Project have been widely quoted to argue that early interventions can pay for themselves in terms of reduced costs to society later on. However, it is risky to extrapolate from studies conducted 20 or 30 years ago to those in effect today, considering that the problems of the children served are likely to be more severe and that the definition of particular outcomes may have changed over time. Also, as noted by Currie (2000), the Perry Preschool Project is not representative of average early intervention programmes. To date, most studies of such programmes have not reported measures of costs and benefits.

In addition, cost-benefit calculations are generally sensitive to the assumptions underlying them. For example, since the costs of the programme are borne 'up front' while some of the benefits appear only later (and some may appear much later, as noted above) the rate at which society is willing to trade off future benefits for current benefits (the discount rate) will affect the estimated value of the benefit.

Benefits may appear larger or smaller depending on what is counted in the trade off. For example, benefits due to child care provision may or may not be included. Other categories of benefits that have been included in cost-benefit studies include reductions in criminal activity and welfare use. A complete cost-benefit analysis would consider not only whether all the benefits of a particular programme were greater than its costs, but also whether the benefits of the programme were greater than those of alternative programmes aimed at improving child outcomes.

In order to make accurate cost-benefit calculations, the costs accruing to a number of different agencies need to be included and, in the long-term, a reduction of costs in one sector (for example health or criminal justice) is likely to be offset by higher costs in another (for example education and lifelong learning).

A review of the cost benefit of interventions with parents (London Economics, 2006: http://www.dcsf.gov.uk/research/data/uploadfiles/DCSF-RW008.pdf) focused on interventions targeted directly at parents, with the objective of directly or indirectly affecting child outcomes. Papers from studies undertaken in the last ten years (published and unpublished) were included in the review, as long as they were in the English language and focused on evaluation of interventions, either quantitative or qualitative. Data from the UK were complemented with international evidence (a large proportion of studies considered were US-based).

Key findings and conclusions:

- *Parenting interventions to promote child educational outcomes* (Peers Early Education Partnership; Family Learning; Bookstart; Parent-child Home Programme; Home Instruction for Parents of Pre-school Youngsters) show mixed results –
    - There are some positive findings for both parents and children, although specific findings are often difficult to interpret.
    - Findings are further complicated by the lack of rigorous evaluation of many interventions. This also makes it difficult to determine the key elements of different projects, given that all have some positive effects and, therefore, it is difficult to compare between them.

- There are few examinations of the costs and benefits of these programmes, and so many caveats hedge the evaluations that have taken place that it is difficult to take useful messages from them
- However, some interventions in this area are very low cost. Both Bookstart and Family Learning are cheap to run and, consequently, the benefit-cost ratio is likely to be positive

- *Home visitation interventions* (Home-Start; Nurse-Family Partnership; Healthy Families America; Parents as Teachers) show some benefits, although effects across a range of child outcomes are likely to be modest –
  - Several programmes have found positive results in some measures of parenting behaviour and attitudes although, overall, the evidence on effects from home visitation programmes is mixed. Several measures rely on maternal self-reporting, which limits the reliability of the findings
  - Few economic evaluations of home visitation services exist, although those that do are generally positive. However, there have been three different cost-benefit analyses of the Nurse-Family Partnership programme and the indications are that the programme is most effective when serving high-risk individuals (a return of $5.70 per dollar) although the programme would have been cost-effective even if aimed only at the low risk sample, with a cost-benefit ratio of $1.26 (Karoly et al., 1998)
  - Little cost-benefit analysis exists within the UK. One study showed that an intensive home visitation programme could be cost-effective compared with a standard home-visiting service. In addition, a survey of primary school parents provided some evidence that society values the reduction of child maltreatment more than the associated costs. This provides support for the continuation of home visitation and other programmes aiming to achieve this (Barlow et al, 2007b). *This study is also one of the 14 included in Beecham and Sinclair, 2007 – discussed earlier in this chapter*

- *Parent training interventions* (Incredible Years; Triple P). The majority of evaluations of parent training programmes assess the ability of programmes to address child behavioural problems (such as conduct disorder) –
  - There is increasingly strong evidence that parent training produces positive results in addressing child conduct disorder, including both children who already have behaviour problems and those at high risk of developing difficulties in the future.
  - However, the heterogeneity of the programmes themselves, as well as the evaluation techniques used in the studies, makes comparison of programmes and the identification of key elements of programmes difficult. Problems are further exacerbated by the lack of methodological rigour in many studies.
  - Several studies indicate that parent training can have positive impacts on parents and children. This includes both reviews of multiple evaluations (e.g. Dretzke et al., 2004) and randomised controlled trials of individual studies (e.g. Hutchings et al., 2002). The majority of studies remain US-based, but recent evaluations have indicated that benefits from parent training can also be achieved in the UK, based around the Incredible Years programme. While there are methodological problems with some of these studies, the majority of reviews are able to draw positive conclusions (Dimond and Hyde, 1999).
  - Positive effects are not limited to child outcomes, with impacts also found on a range of other outcomes, including parental depression (Hutchings et al., 2007),

maternal anxiety, self-esteem and relationship with the mother's partner (Barlow et al., 2003) and parenting behaviour (Lundahl et al., 2006).

- Evidence showing that there are benefits to parent training is supported by the existing cost-effectiveness analysis, although the extent of the analysis remains limited due to the lack of studies examining the long-term effectiveness of parenting programmes.
- While it appears that the cost of parent training is low, further evidence of the long-term monetary benefits is needed. However, the long-term benefits of any parenting programme would only have to be small to make the very small investments in parenting programmes efficient.
- Analysis of the change in service costs over a six-month period suggests that a parent training programme will not pay for itself in the short-run. The implementation of the Incredible Years programme in Sure Start centres in Wales (see Chapter Five) found a net cost to the intervention group of £1,992. Cost effectiveness analysis showed that the programme was more effective for children with more severe problems (Edwards et al., 2007b)

Summary: what do we know about the costs and benefits of early intervention?

- A long-term approach to decisions on spending and service planning needs to be taken if resources are to be shifted towards intervention earlier in life and earlier in the development of problems for high risk children
- The evidence base is stronger for specialist, targeted services than for universal family support services although, when evaluated, the latter have appear to be both relatively low cost and well received
- It is easier to improve outcomes for younger children – and remedial work for young people becomes progressively more costly the later it is attempted
- Early engagement pays a high rate of return. High quality longitudinal research of an innovative preschool initiative from the US indicates major benefits to the criminal justice system, health, education, employment and income levels and a return of $17 dollars for every dollar spent by the time participants reached the age of 40
- However, it is risky to extrapolate from studies conducted 20 or 30 years ago (and outwith the UK). The problems of the children served are likely to be more severe and the definition of particular outcomes may have changed over time
- No one has yet modelled the dynamic and complex factors that would affect growth in the UK if greater investment was made in the early years.
- Evidence on the effectiveness of parenting interventions which focus on improving educational outcomes for children is inconclusive and further complicated by lack of rigorous evaluation of many interventions, and few examinations of costs and benefits. However interventions in this area may be low cost and so the benefit-cost ratio is likely to be positive
- Home visitation interventions show some benefits, although effects across a range of child outcomes are likely to be modest. However, cost-benefit analyses of the Nurse-Family Partnership indicate that the programme is most effective when serving high-risk individuals and would be cost-effective even if aimed only at low-risk families
- There is strong evidence that parent training produces positive results in addressing child conduct disorder, although it is difficult to identify the key elements of programmes which achieve better outcomes for children
- Several studies (including recent evaluations of the Incredible Years programme in the UK) indicate that parent training can have positive impacts on both parents and

children
- The cost of parent training is relatively low and the long-term benefits of parenting programmes need only be small to justify the investment

8.6 Creating and fostering non-violence in society

8.6.1 The WAVE Trust

Violent crime is increasing in western society. In 2001, it was estimated to cost the UK more than £21 billion per annum and only a tiny fraction of this is spent on prevention. As noted by Hosking and Walsh (2005), violence is triggered in high-propensity people by social factors such as unemployment, poor housing, overcrowding, economic inequality, declining moral values and stress, and alcohol plays a significant role in the timing of violence. Since these factors reflect long-term trends that are difficult to reverse, investment in reducing the number of people with propensity to violence is a strategic imperative.

The WAVE Trust (Worldwide Alternatives to Violence) was formed to identify and disseminate best practices for creating and fostering non-violence in society, through a soundly-researched understanding of the root causes of violence. In 2005, the Trust published results from an eight year study of the root causes of violence (Hosking and Walsh, 2005). Main findings included the following:

- The propensity to violence develops primarily from wrong treatment before the age of three
- The structure of the developing infant human brain is a crucial factor in the creation (or not) of violent tendencies, because early patterns are established not only psychologically but at the physiological level of brain formation
- Empathy is the single greatest inhibitor of the development of propensity to violence. Empathy fails to develop when parents or prime carers fail to attune with their infants. Absence of such parental attunement combined with harsh discipline is a recipe for violent, antisocial offspring
- The single most effective way to stop producing people with the propensity to violence is to ensure infants are reared in an environment that fosters their development of empathy. The surest way to achieve this is by supporting parents in development attunement with their infants
- WAVE's search for global best practice in prevention of violence identified many effective early interventions. These include programmes which develop attunement and empathy in tomorrow's parents while they are still in school; current parents; parents-to-be
- Just a tiny fraction of the cost of violence in the UK is spent on prevention, and most of what is spent focuses on the least effective age groups (e.g. 5-15). Early intervention (0-3) is fruitful and cost effective. Negative cycles can be transformed and children given the opportunity to grow into contributing, personally fulfilled adults (and future parents)

8.6.2 Rand Corporation economic evaluations

The authors of the WAVE report note that several studies in the US and Canada have looked at the cost-effectiveness or cost-benefit of approaches to reducing violent crime. Most of these studies were carried out more than 10 years ago, and little detail is included about them in the report, but more information is provided about work carried out by the RAND Corporation (Greenwood et al., 1996). This studied the comparative cost-effectiveness of five approaches to reducing serious crime, including prison and training for parents of 5-7 year olds. The evaluation took a narrow view of the financial benefits of parent training, putting no financial value on the prevention of child abuse (which it did not treat as a crime) and ignoring benefits other than crime reduction (e.g. better educational achievements, employment history, emotional development and mental health).

Even with this restricted view, parent training emerged as highly cost-effective for preventing serious crime: £4,000 per serious crime prevented, compared with £9,000 for both teenage supervision and prison. Since parent training has more impact when carried out well before children reach the age of five, earlier training may be expected to compare still more favourably.

8.6.3 Key interventions to reduce violence or the root causes of violence

In the course of the research for the WAVE report, over 400 interventions that might reduce violence, or the root causes of violence, were examined. However, most have not been evaluated, meaning their effectiveness cannot be objectively determined.

From the evaluation process, four programmes stood out as being of particular interest. They combined three qualities:

- They addressed the core issues of developing both empathy and attunement
- They intervened at optimum times (ideally before the birth of the first child)
- They had research evidence to support their effectiveness.

The four programmes were:

- Nurse-Family Partnership (supporting first time parents from pregnancy onwards)
- PIPPIN (preparing parents-to-be during the first pregnancy)
- The Circle of Security (a programme to increase sensitivity between parents and children)
- Roots of Empathy (ROE) (preparing parents-to-be while still children)

The first two of these have been discussed in Chapter Two (and the Nurse-Family Partnership earlier in this chapter).

8.6.4 Nurse-Family Partnership

The Nurse-Family Partnership topped WAVE's evaluation system, and was also recommended by the Sure Start review, "Blueprints" by the US-based Centre for the Study and Prevention of Violence, Support from the Start (Sutton et al., 2004) and "A guide to promising approaches, second edition," (2005), Communities that Care.

The RAND economic evaluation of the programme showed savings (reduced welfare and criminal justice expenditures and increased tax revenues) exceeding programme costs by a factor of four over the life of the child. The original investment was returned well before the child's fourth birthday; from then until age 15 the scheme was delivering net economic benefits to society – in addition to lower crime, much reduced child abuse and conduct disorder, and more successful life outcomes for mothers and children (Karoly et al., 1998).

8.6.5 PIPPIN

PIPPIN is well known and highly regarded by several senior directors of children's charities in the UK. It has been recommended by the Health Select Committee Report (HMSO, 1997), the Expert Committee for the European Regional Council of the World Federation for Mental Health, and is recommended by the Sure Start Guide to Evidence Based Practice, Trailblazer Edition (Sure Start, 1999). However, the WAVE report does not quote any specific evidence relating to the costs and benefits of the programme.

8.6.6 Circle of Security

The programme is a 20-week, group-based, parent educational and psychotherapeutic intervention designed to shift patterns of care-giving interactions in high-risk, caregiver-child pairs. Support between meetings is provided by teachers and family service coordinators. High-risk families are originally identified and assessed by a university-based assessment team and Circle of Security therapists. The programme is designed to:

- Decrease risk factors among families who demonstrate disordered attachment patterns, and who show potential for resilience and the capacity to change
- Enhance caregiver observational skills, functioning and empathy
- Facilitate caregivers' ability to create more secure attachments with their children
- Foster understanding and community support related to attachment issues of high-risk families

It appears from the references in the WAVE report that the programme is relatively recent, and it appears to be confined to the US at present. There is also no mention of any economic evaluation of the programme to date. However, early findings suggest that the intervention has:

- Increased ordered child and caregiver strategies
- Increased secure caregiver strategies
- Increased secure child attachment
- Increased caregiver affection, sensitivity, delight and support for exploration
- Decreased caregiver rejection, neglect, flat affect and role reversal

8.6.7 Roots of Empathy

Roots of Empathy (ROE) is a widely applied and evaluated parenting programme for children aged 3-14 (not yet delivered within the UK). Its goal is to break the intergenerational cycle of violence and poor parenting. The WAVE research was particularly interested in ROE because of the ways in which it prepares schoolchildren for parenthood. It emphasises,

models and provides literal hands-on experience of how to handle and interact with a real-life baby.

In a classroom setting, children share in 9 monthly visits with a neighbourhood parent, infant, and trained ROE instructor. The instructors conduct 18 further visits without the family. Babies are aged 2-4 months at the beginning of the intervention and about 1 year at the conclusion, a period of enormous growth and development. Over this time, the students learn to see and feel things as others see and feel them, and understand how babies develop. They become attached to 'their' baby and observe the infant's development, learning about its needs and interacting with it. The programme also links to the school academic curriculum: students use maths skills to measure, weigh and chart the development of the baby, and write and read stories and poems that tap and help them relate to their own emotions.

A number of projects have evaluated the ROE programme. Findings indicate that ROE children (relative to comparison children) demonstrated significant improvements from pre-test to post-test in the following areas:

- Increased emotional knowledge
- Increased social understanding
- Increased pro-social behaviour with peers
- Decreased aggression with peers
- Decreased proactive aggression (e.g. bullying)

WAVE carried out an in-depth review of ROE and was highly impressed with the findings. The report does not discuss issues of transferability, although the Canadian-based initiative is now being piloted in Australia and Japan. The WAVE report does not include any findings relating to cost-benefit analysis of the ROE programme.

8.6.8 Recommendations of the WAVE report

The WAVE report recommended that:

- Adoption of these recommended programmes by local communities should be encouraged under the umbrella of Sure Start, with adequate funding made available to support them
- Government funds should be ring fenced under a new 'Early Prevention Initiative' and allocated to local authorities and primary care trusts willing to run pilot studies of a list of approved early prevention programmes
- Specific pilot studies of the four front-running programmes should be funded.

Weblink to the WAVE report:
http://www.wavetrust.org/index.htm?http://www.wavetrust.org/WAVE_Reports/index.htm

Summary: what do we know about creating and fostering non-violence in society?

- Violence costs the UK more than £21 billion per annum. A tiny fraction of this is spent on prevention, and most of what is spent focuses on the least effective age groups (e.g. 5-15)
- Violence is triggered in high-propensity people by social factors such as unemployment, poor housing, overcrowding, economic inequality, declining moral

values and stress. Alcohol plays a significant role in the timing of violence

- The propensity to violence develops primarily from wrong treatment before the age of three
- Early interventions (0-3) are fruitful and cost effective. Negative cycles can be transformed and children given the opportunity to grow into contributing, personally fulfilled adults (and future parents)
- The structure of the developing infant human brain is a crucial factor in the creation (or not) of violent tendencies
- Empathy is the single greatest inhibitor of the development of propensity to violence. Empathy fails to develop when prime carers fail to attune with their infants
- Parent training has evaluated as highly cost-effective for preventing serious crime: £4,000 per serious crime prevented, compared with £9,000 for both teenage supervision and prison. Training carried out before children reach the age of five may be expected to compare still more favourably
- The WAVE Trust examined over 400 interventions that might reduce violence, or the root causes of violence. The Trust identified 4 programmes as being of particular interest because of their focus on addressing core issues of empathy; intervening before the birth of the child; having research evidence to support their effectiveness. The programmes were:
    - the Nurse-Family Partnership (supporting first time parents from pregnancy onwards)
    - PIPPIN (preparing parents-to-be during the first pregnancy)
    - The Circle of Security (a programme to increase sensitivity between parents and children)
    - Roots of Empathy (preparing parents-to-be while they are still children)
- The WAVE report recommended that adoption of the above programmes should be encouraged under the umbrella of Sure Start, and supported by new, ring fenced funding, with resources invested in specific pilot studies of the 4 front-running programmes

CHAPTER NINE SUMMARY AND CONCLUSIONS

9.1 Introduction

The Scottish Government is committed to reducing inequalities in the early years and is therefore anxious to investigate the effectiveness of interventions that address a spectrum of issues, from early sexual activity through to the development of confident, secure, healthy school-age children. This informed the discussions of the Ministerial Task Force on Inequalities, which reported to Cabinet in May 2008 and, subsequently, the Government's Early Years Framework.

This paper has been prepared by the Scottish Government's Health Analytical Services Division to:

- Investigate the relevant evidence base and advise policy colleagues of the known effectiveness of specific interventions
- Coordinate relevant information being gathered by colleagues across the Scottish Government and more widely to support policy development and delivery

9.2 Pregnancy

There is a large body of evidence to suggest that risk for many chronic conditions is set, at least in part, in foetal life or immediately after birth. Foetal growth and development is influenced by under-nutrition, risk behaviours such as smoking and alcohol and maternal stress and anxiety; and a number of risk factors for children's subsequent behaviour and mental health problems relate to pregnancy.

9.2.1 Pregnancy at a young age

What do we know about averting pregnancy at a young age?

- Evidence supports school-based sex education and community-based education, and contraceptive services
- Campaigns to increase condom use can delay initiation and reduce the frequency of sex
- Programmes which offer educational supports linked to improving job prospects may motivate young people to avoid pregnancy
- Parenting programmes and antenatal care programmes can improve outcomes for both teenage mothers and their infants. However, the most vulnerable groups are least likely to engage with educational systems.
- A promising initiative, not yet evaluated in the UK, is the Baby Think It Over programme, in which a young person is given a computerised model baby to care for. However, indications are that the simulator needs to be included in a wider programme of lessons on relationships and personal development in secondary school
- The popularity of computer games offers opportunities to engage young people in games involving the care of young babies

Where is the evidence base weak?

- There is little evidence relating to the UK in general, and Scotland in particular

- There is inadequate focus on early fatherhood
- Interventions tackling broader 'upstream' issues of poverty and disadvantage are currently lacking
- The methodological quality of many existing studies is poor and/or focused on a range of outcomes, making it difficult to draw meaningful messages about the effectiveness of individual interventions

9.2.2 Maternal nutrition during pregnancy

What do we know about improving maternal nutrition during pregnancy?

- There is strong evidence to suggest that certain dietary supplements (e.g. calcium) reduce risks in pregnancy and preterm birth.
- Maternal nutritional status at the onset of pregnancy appears to be more critical than nutritional adequacy *during* pregnancy for foetal growth
- Factors such as stress may have a more pronounced effect on foetal nutrition (and hence birth weight) than has been acknowledged to date
- Providing advice and information alone is not enough to change dietary behaviour. The more intensive and direct the intervention (e.g. as vouchers, provision of food or provision of supplements) the greater the chance of success in improving nutritional status
- There are significant challenges in engaging young, low income mothers-to-be

Where is the evidence base weak?

- Good quality evidence relevant to Scotland is very limited
- There is very little evidence relating to targeted evaluations focusing on particular socio-economic, ethnic or other vulnerable groups, or those subject to multiple risks from smoking, poor diet and negative psychosocial factors

9.2.3 Smoking cessation during pregnancy

What do we know about helping smoking cessation during pregnancy?

- Evidence indicates that multi-faceted initiatives are more likely to be effective than those offering a single service
- Routine contact with health professionals during the prenatal period offers opportunities for intervention that have been under-utilised to date
- Advice and support for pregnant women may not reach, or be acceptable to, those at highest risk
- Increasing support for smoking cessation during pregnancy and the immediate postnatal period may affect breastfeeding rates, so could be a legitimate part of a breastfeeding support programme

Where is the evidence base weak?

- Evidence relies too heavily on self-reported behaviour and does not take into account the different experiences of heavy and light smokers.

9.2.4 Maternal stress during pregnancy

No study has yet evaluated a programme or service designed to reduce maternal stress during pregnancy. However, the *Nurse-Family Partnership,* described and evaluated in the US and currently being implemented in ten test sites in England, appears promising.

Nurse-Family Partnership
The programme is offered to young, disadvantaged pregnant women. Support includes: parenting and health education; referrals to other services; employment advice; help forming mutual support networks. In general, the programme is delivered by nurse visitors, but an approach using paraprofessionals (who received the same training and provided the same services as the nurses) has also been tried and evaluated

What do we know about the effectiveness of the Nurse-Family Partnership?

- Evidence from randomised controlled trials shows a major impact on life outcomes for socio-economically deprived mothers and their children. The evidence comes from the programme as typically implemented in a low income community
- Children of nurse-visited mothers were less likely to receive health care for injuries and ingestions in the first two years of life
- Although the programme had no significant effect on children's behavioural problems at age 2, a much lower percentage of children of nurse-visited mothers exhibited severe behavioural problems when followed up at 6 years old
- Children of nurse-visited women followed up at 15 years old had experienced fewer arrests and fewer incidents of child abuse and neglect
- Mothers who had received nurse visits experienced fewer arrests and convictions, spent less time on welfare and had fewer subsequent births
- Visits from trained paraprofessionals did not achieve the same effects as the nurse-visiting programme
- The programme is particularly interesting because outcomes for both mothers and children are *most promising* for the *most disadvantaged* groups
- This is important evidence of the potential effectiveness of an intensive, antenatal home visiting programme that offers 'multiple' support – as long as that support is sustained during the first years of life

Where is the evidence base weak?

- The initiative has not been evaluated in the UK to date, and it is not clear whether findings are transferable to countries where health services are provided free at the point of delivery. The services received by mothers in the US comparison groups would also be very different from health visiting services in the UK

9.2.5 Antenatal classes

What do we know about the effectiveness of antenatal provision?

- A key issue is the degree to which parents living in disadvantaged areas are able to access the support that is available and whether they feel it meets their needs

- Educational/informational interventions can improve knowledge, but are less likely to have an impact on behaviour or psychosocial wellbeing
- Providing a range of health education, psycho-social and developmental topics in antenatal clinics, and looking at the stage in pregnancy when parents are likely to be most receptive, appears to be a promising approach

PIPPIN
This is a UK-based initiative designed to improve and maintain parents' emotional and psychological wellbeing and help them prepare for parenthood. PIPPIN uses a variety of professionals and volunteers to engage fathers as well as mothers. Support begins during the last 3 months of pregnancy and continues until the infant is 3-5 months old. A single, small sample evaluation indicated that the initiative helped parents to enjoy more positive relationships with their babies and with each other.

PIPPIN has received international commendation as an example of excellence.

Where is the evidence base weak?
- Little research has been carried out on the content of antenatal classes
- Little evidence relates specifically to Scotland, or the rest of the UK

9.3 Birth onwards – nutrition, smoking cessation and safety

9.3.1 Breastfeeding

What do we know about the effectiveness of initiatives to support breastfeeding?
- The evidence base on the initiation and duration of breastfeeding is fairly comprehensive, although research relating specifically to Scotland is sparse
- Multi-faceted interventions, focused specifically on breastfeeding, appear to be the most effective. Interventions should span the ante and postnatal period and draw on repeated contacts with professionals and/or peer educators
- A review of evaluations to support breastfeeding in neonatal units found considerable support for Kangaroo Mother Care (KMC), with studies consistently demonstrating advantages for the infant in terms of physiological stability, reduced morbidity and improved breastfeeding rates
- Eight actions were identified by NICE on the basis of evidence from systematic reviews:
  - support for the Baby Friendly Initiative in maternity and community services
  - a mix of education and/or support programmes routinely delivered by health practitioners and peer supporters
  - changes to policy and practice to encourage and promote breastfeeding
  - clinical care to support mother-baby contact
  - peer or volunteer support for mothers in the early postnatal period
  - breastfeeding education and support targeted on women on low income
  - one-to-one needs-based education throughout the first year
  - local media programmes to target teenagers to improve attitudes to breastfeeding

Where is the evidence base weak?

- Little attention has been given to interventions directed at groups where rates of breastfeeding are low
- There is a lack of information on participants' views of interventions
- Large, good quality, studies are needed to evaluate the ways national media campaigns can be used to shift cultural values, so that breastfeeding can be recognised as a cultural norm
- There is a lack of large scale, high quality, UK-based evaluations of the Baby Friendly Initiative
- There is inadequate evaluation of the effects of non-health sector interventions, such as school programmes targeting girls and boys prior to pregnancy
- Little attention has been paid to clinical and emotional problems associated with breastfeeding
- Studies need to include outcomes related to costs for families, employers and health services
- There are a number of methodological weaknesses in studies carried out to date, such as imprecise definition of terms in relation to breastfeeding, and potential confounders (e.g. feeding intention) not always taken into account

9.3.2 Smoking cessation in the postnatal period

What do we know about what helps smoking cessation in the postnatal period?

- Supporting parents to achieve a smoke-free home environment appears to work better than focusing on stopping smoking
- Smoking bans with widespread public support are a prerequisite for the adoption of smoking restrictions at home
- Early findings from the evaluation of smoke-free legislation in Scotland indicates that there is no evidence of smoking shifting from public places into the home

Where is the evidence base weak?

- Research to date has relied too heavily on self-reported behaviour and has failed to focus on the impact of factors such as socioeconomic status and the different experiences of heavy and light smokers

9.3.3 Maternal and child nutrition in the post-weaning period

What do we know about what works to address maternal and child nutrition in the early years?

- Broad measures to improve income in disadvantaged households, and improve access to cheap, nutritious food, are more likely to be effective than providing information and education about nutrition
- Breastfeeding should be promoted as an integral part of a wider nutritional agenda

Where is the evidence base weak?

- There is a need to focus research on specific vulnerable groups (such as families on low incomes and minority ethnic families) and to consider nutrition as part of a broader, life course issue

9.3.4 Oral and dental health

What do we know about what works to promote oral and dental health?

- It is likely that a combination of approaches (including information, education, promotion of healthy eating options, practical support and free dental checks) will be most effective in reducing dental decay in young children
- Steps to raise awareness and understanding about nutrition more generally will also be relevant.
- *Childsmile (West),* which targets children at risk of tooth decay from the earliest stages of infancy, is a promising initiative which will be evaluated during its 3 year pilot period

Where is the evidence base weak?

- Given that the most disadvantaged families are the least likely to engage with relevant public health messages, it would be helpful to target research on what helps to engage them and change behaviours

9.3.5 Accidents and injuries

What do we know about what works to prevent accidents and injuries to young children?

- This is one area where single issue campaigns (such as those focusing on safety equipment in the home) can be effective
- Basic modifications to the environment (such as playground design) can reduce the severity and frequency of accidents
- Relatively low cost initiatives to improve road safety can be effective and benefit the whole community, in addition to those who are particularly vulnerable
- Home visiting programmes can reduce rates of child injury in the home, although it is not clear which components of programmes are effective
- Educational programmes alone have little effect
- Interventions that address issues via a range of modes (such as changes to legislation, education, safety equipment and environmental modification) are the most likely to be successful

Where is the evidence base weak?

- The evidence base is dominated by literature from the US and, in general, reports do not provide adequate information to indicate whether findings might be transferable to Scotland
- When considering the effectiveness of initiatives, research needs to focus on the attitudes and habits that underlie many risky behaviours

9.4 Birth onwards – Home visiting programmes

Home visiting has been identified as an important intervention for tackling health inequalities from an intergenerational perspective, and is capable of producing improvements in parenting, child behavioural problems, cognitive developments in high-risk groups, a reduction in accidental injuries to children and improved detection and management of postnatal depression. However, the evidence base includes a number of different approaches, and not all evaluations are positive. This section focuses primarily on individual models operating in Scotland and elsewhere, to highlight the known strengths and weaknesses of each approach.

Sure Start Scotland
This is the main programme in Scotland which supports vulnerable families with very young children. The objectives of the initiative are to: improve children's social and emotional development; improve children's health; improve children's ability to learn; strengthen families and communities. The initiative aims to change and enhance existing services, rather than providing a specific service

What do we know about the effectiveness of Sure Start Scotland?

- The impact of Sure Start has yet to be evaluated in Scotland, but a mapping exercise carried out in 2004/05 found that some Sure Start services had formal evaluations in place and the majority of local authorities carried out formal consultations. Benefits of Sure Start funding include:
  - capacity building (in terms of staff and premises) has helped staff to work with harder to reach families as well as improving service quality
  - recruitment of local people as volunteers for services
  - improvements in joint working between professional groups
  - services aiming to serve the hardest to reach groups reported some success (self report only)
  - improved child behaviour and development and increased self-esteem of the parent
- The following concerns have been raised:
  - demand for Sure Start services outweighs supply
  - how to ensure provision of support beyond age three?
  - how to balance the needs of the highest priority families with preventative work with other vulnerable families
  - support may become intrusive
- In England, a programme of evaluation has found that, where Sure Start is implemented as intended, there is some evidence of effectiveness, but that it is too early to see the expected long-term benefits. To date, the initiative has experienced difficulties reaching and engaging the most disadvantaged families.

Starting Well
This initiative began as a national health demonstration project in Glasgow, focusing on intensive home-visiting support and the provision of a strengthened network of community-based services in two deprived communities. The initiative was implemented through health visitor-led skill mix teams. After the initial phase, the service moved to a targeted approach for those most likely to gain from the interventions. It has now devolved across Glasgow.

What do we know about the effectiveness of 'Starting Well'?

- The first phase of the service has been evaluated, but findings are difficult to interpret, not least because the initiative was implemented differently in the two intervention sites, and the approach was diluted to some extent
- The intensive visiting programme encouraged mothers to trust services
- Better quality information on needs and life circumstances helped in putting together individualised care packages
- Variations in process and outcomes depended on the receptivity of mothers to the service, and health visitor caseload pressures

The Child Development Programme (CDP) and the Community Mothers Programme (CMP)
The CDP programme operates throughout the UK and internationally. It offers monthly visits to parents by specially trained health visitors, starting antenatally and continuing for the first year of the child's life. The programme focuses on health, language, cognition, socialisation, nutrition and early education. It aims to develop the potential of the parents, rather than making them dependent on the health visitor.
The CMP programme evolved from CDP and uses volunteer 'community mothers,' who receive training to support recipients of the programme

What do we know about the effectiveness of the Child Development Programme and the Community Mothers Programme?

- Evaluation of the CDP in the UK indicated that empowering parents to take control of the health and development of their children and fostering their parenting skills are fundamental for the success of the programme
- A longitudinal study of the effectiveness of the First Parent Visitor Programme (a variant of the CDP) in the UK was unable to demonstrate an overall advantage over conventional health visiting
- Evaluation of the Comprehensive Child Development Programme in the US found that children's health, ability to concentrate and social behaviour were better, compared with those who received conventional postnatal care, and that they were more likely to have story books at home.
- An evaluation of the CMP in the Irish Republic found that visits from community mothers had beneficial effects on parenting skills and maternal self-esteem, which were sustained over time. The effects also carried through to subsequent children born to mothers, who were more likely to have received immunisation and to have been breastfed.
- In general, it is not clear from the evidence whether outcomes were better or worse for particular groups of families within the communities participating in evaluations of the CDP or CMP and, therefore, it is hard to tell whether the initiatives are effective for the most disadvantaged families
- The CMP is not a costly or intensive intervention and offers benefits to the community volunteers and, potentially, to the wider community as well as to the mothers visited

Home-Start
This is a UK-based volunteer home visiting programme which offers support, friendship and practical help to young families under stress, in their own homes. All volunteers must have experience of being a parent.

What do we know about the effectiveness of Home-Start?

- There is little information about the effectiveness of the intervention in Scotland – an evaluation of the 18 schemes operating in 1998 appears to have relied on survey information and self-reported health improvements
- The volunteers who delivered the scheme were valued as friends who offered practical support
- An evaluation of the costs and outcomes of Home-Start support in Northern Ireland and the south of England found that mothers valued the service, exhibited fewer depressive symptoms at follow-up and were experiencing less parenting stress. However, much of the change appeared to be due to the passage of time and greater experience of parenthood. At follow-up, there were no significant differences in formal service costs between the study and comparison groups, although the receipt of Home-Start services pushed costs for the study group higher than costs for the comparison group.
- The researchers who carried out the costs and outcomes study suggested that the benefits of a community-based initiative, which does not aim to provide a structured, intensive programme, might only be apparent after a number of years

9.5 Parenting education and support – early years

Parenting education and support is a diffuse subject area and it is not easy for policy makers to extract clear messages from the evidence base. Overviews do not tend to isolate effectiveness specifically for the infant or preschool child and confounding dimensions such as gender, ethnicity, family status and race are often neglected. Studies also often fail to discriminate between the contribution of different programme elements such as format, method of intervention, group support or therapists'/facilitators' skills.

*What do we know about the impact of parenting education and support on **child outcomes?***

- Parent education programmes *can* improve the emotional and behavioural adjustment of young children and the behaviour of pre-adolescent children who have behavioural problems. However, there is currently little evidence that improvements are maintained over time
- Effects are not universal and the most disadvantaged families are least likely to benefit (because of the problems experienced by parents themselves and/or because they are least likely to become, or to remain, engaged with the programme). This suggests that even when initiatives target people at greatest disadvantage, it remains difficult to engage those in most need
- There is some evidence that group-based programmes are more cost-effective than individual, clinic-based training, as well as providing parents with peer support
- The involvement of both the mother and father, and direct work with the child, increases efficacy

- Tackling family problems, in addition to child behaviour problems, has resulted in improved child outcomes

Where is the evidence base weak?
- Much of the research to date has been conducted in the US
- Good quality longitudinal research is required to explore whether improvements are sustained over time
- Research needs to focus on engaging and meeting the needs of parents in the most disadvantaged circumstances

*What do we know about the impact of parent education and support on **parent outcomes?***

Parenting skills
- Programmes have been shown to be effective: boosting specific parenting skills is strongly associated with good outcomes for both parents and children
- Parents report enhanced wellbeing and enjoyment of parenting following the intervention
- Parents appreciate a practical approach to learning specific skills
- Parents draw comfort and support from their peers in group programmes
- How programmes are implemented appears to be critical to their success: it is important that parents engage actively in order to reap the benefits
- The most disadvantaged parents tend to experience the most negative outcomes
- Few studies have collected follow-up data on parent outcomes, although there is some evidence of improvements being sustained for up to two years
- Specific gaps in the evidence base are:
  - children's perceptions of changes in parenting as a result of the programme
  - how well varying types of intervention serve different groups in the community
  - assessment of the long-term impact of programmes

Parenting attitudes and beliefs
- Research indicates that programmes have benefits for parents (measured by self-report)
- Few studies have collected follow-up data, but effects have been shown to persist for up to 6 months
- There is no evidence that the major cognitively based programmes are effective for the most deprived populations, and they may not be appropriate for parents in the most distressed circumstances
- Alternative approaches of working effectively with higher risk families to alter parenting attitudes should be explored

Parenting knowledge
- Factual knowledge and understanding of child development and child care can be enhanced in the short or medium term, for parents of all types and ages
- Studies show significant gains in knowledge following the intervention, and some show self-reported changes in behaviours
- Few studies were able to make robust measures of changes in behaviour, but there are indications that interventions can change behaviours
- The most disadvantaged groups made the greatest gains
- Women and girls are likely to benefit more from these kinds of intervention than men and boys

- Future research could usefully focus on:
  - the mode of intervention best suited to each sex
  - better measurement of change in parenting and child behaviours
  - whether low-level interventions can achieve the same results as more intensive designs
  - whether benefits persist in the medium to long term
  - whether follow up programmes and booster sessions enhance effectiveness

Parenting mental health

- A number of different approaches have been shown to be effective: it appears that common 'process' factors in the delivery of programmes may be more important in influencing effectiveness than any one theoretical approach
- Future research could usefully focus on:
  - the precise components of service delivery that that influence success
  - interventions that reduce risk for postnatal depression
  - the mental health needs of fathers, parents from different ethnic groups and deprived social backgrounds

9.5.1 The National Audit of Parent Antenatal and Postnatal Education Provision in Scotland, 2005

What do we know about parent education provision in Scotland?
Provision

- A range of parent education initiatives is available across Scotland, although the central belt may be better served than more rural and remote areas
- Topics are delivered by a variety of methods: group work/workshops are the most common
- Services are delivered by a range of different professional groups and volunteers (including health visitors, midwives and parents)
- Users/parents are often included in service planning, although involvement in decision making and the day to day running of services is less common
- Services target parents facing a range of health and lifestyle challenges and most providers believe they reach some of their target group

Views of providers and users

- Mothers found both antenatal and postnatal classes useful for practical advice and emotional support, including from other mothers. They wanted more information about dealing with problems
- Mothers who had been involved in determining the content of classes were more likely to express satisfaction
- Providers usually catered for parents' wishes and believed that emotional support was generally provided by the peer group
- Providers expressed some concern that the focus of the education was on promoting healthy behaviours (e.g. breastfeeding) rather than supporting the individual parent's decision
- Regular sessions were felt to be important to provide security, keep people engaged and to build relationships
- Providers had differing views about who should deliver a service and the relative importance of personal experience and professional skills

Accessibility of services

- Providers felt that a range of issues around accessibility, motivation and understanding could affect participation in classes
- Providers supported service delivery within the client's home, the environment where parenting is taking place

9.5.2 Evidence relating to particular parenting programmes

Three major parenting programmes that have been the subject of evaluation are considered below. All have been shown to be effective, although each has areas of weakness. In addition, it should be noted that the people responsible for developing *Triple P, Incredible Years* and *Mellow Parenting* have all been closely involved in the evaluation of the programmes to date, possibly compromising the objectivity of the findings.

The Positive Parenting Programme (Triple P)
Triple P is a Behavioural Family Intervention programme based on social learning principles. Originally developed in Australia, and used widely in a range of countries and situations, it is a programme with standardised training and accreditation processes. Delivered to parents and not to children, it works at five levels (from community based to a narrow targeted focus). The programme is based on five core parenting principles:

- Ensuring a safe and engaging environment for children
- Creating a positive learning environment for children
- Using assertive discipline
- Having realistic expectations, assumptions and beliefs about the causes of children's behaviour
- The importance of parental self-care

Triple P is of particular interest because of its adoption as part of the Starting Well Health Demonstration Project in Glasgow

What do we know about the effectiveness of Triple P?

- Studies have reported improvements in a range of behaviours and relationship problems for up to two years after intervention
- Triple P has been found to be effective in a range of settings and with several different family types
- In Scotland, providers felt that Triple P was more effective for those whose lives were more ordered – i.e. not the most deprived families
- The possible stigma of attending a parenting programme was an issue for both providers and parents
- The relative affluence of parents in visual materials was more of an issue for participants than the 'Australianess' of the materials

Incredible Years Programme
The programme was developed in Canada and is aimed at parents of children aged 1-10 who are at high risk of developing conduct disorder. It is a behavioural-humanistic programme addressing child behaviour and the parent-child relationship. The initiative comprises a number of different interventions involving parents, teachers and children.

What do we know about the effectiveness of the Incredible Years Programme?

- The intervention has been demonstrated to enhance parenting skills and parenting self-confidence, along with a range of other positive effects.
- Evaluated across Sure Start areas in Wales, improvements in child problem behaviour were maintained up to the 18-month follow up
- The programme worked equally well across all participating Sure Start areas, regardless of differing crime levels
- The programme can be effective when those who need help most are targeted by knowledgeable health visitors, programmes are implemented with fidelity, group leaders are supervised and accredited and barriers to attendance are addressed

Mellow Parenting
The intervention is a 14 week, one day a week group designed to support families with relationship problems with their infants and young children. It combines personal support for parents with direct work with parents and children on their own parenting problems. It is particularly interesting because it was developed for use in deprived communities in Scotland and has been adapted to meet varying needs (such as Mellow Fathers and Parenting in Prison)

What do we know about the effectiveness of the Mellow Parenting Programme?

- The intervention improves parent-child interaction, child centredness, mother's mental health and child behaviour problems
- The programme would profit from more rigorous scrutiny, using research design incorporating a control condition and longer term follow up

9.5.3 Initiatives to promote positive parenting in Scotland

Parenting Across Scotland (PAS)
This is a multi-agency partnership project which aims to research the concerns and issues affecting parents and the support available, by bringing together organisations and knowledge to share good practice and represent the views of parents in policy. PAS promotes a positive image of parenting, in recognition of the commitment that families show in raising children.

OK to Ask
This provides a gateway approach to parent helplines. Evaluation of a pilot in 2006-07 indicated that the gateway was welcomed by all stakeholders, but there was a general lack of clarity about its nature and purpose.

Parent Information Points (PIPs)
Piloted in 2006 through PAS, PIPs were single two-hour sessions in schools which provided:

- A marketplace of representatives of local support agencies
- A 'ten top tips' presentation about child development at the relevant transitional stage
- Presentations or workshops from other agencies on subjects relevant to the age group

One of the five PIPs focused on a pre-school project. The pilot was evaluated and reported in February 2007.

What do we know about the effectiveness of PIPs?

- Although parents and agencies through that PIP was a good idea, it proved difficult to attract parents to attend PIPs
- Parents who attended all said they would recommend the PIP to a friend. Some had already passed information they had received on to others
- The marketplace was the most successful aspect of the PIP format (receiving endorsement from all parents who attended)
- Almost all parents who attended said they felt better informed about the support services available to families

A model for parenting services in Glasgow (draft)

An unpublished draft discussion paper provides an evidence-based model for parenting services in Glasgow. The paper highlights a number of considerations that are likely to be more widely applicable, and chimes with the findings of earlier chapters of this paper. The paper recommends:

Low cost universal interventions: baby buggies and carriers designed to bring babies into close contact with parents' faces and bodies; baby massage to improve sleep and contentment; use of mass media programmes to deliver infant mental health messages; open access parenting classes delivered to large numbers of families.

Active filtering: early intervention to maximise chances of success; health visitor training in the field of evaluating parent-child relationships; routine health visitor contact to continue for one year instead of 8 weeks and further health visitor contact with all families when the child is in the 3rd year of life; health visitors to be kept informed about any concerns that GPs or other service professionals have about the child

Additional assessments: robust methods for additional, structured assessments of children and families who give cause for concern (including a wide range of measures); health visitors to receive 6 months' training to become proficient in using the tools

Interventions: the Triple P programme for children under 3 years; the Incredible Years programme (for children between 3 and 5 years); a more intensive intervention for families with additional needs – possibly Mellow Parenting, although further evaluation is required; support to enable vulnerable families with additional needs to use these programmes (child care, transport, accessible venues).

9.6 Three to eight years – early years education and childcare

Although there is an extensive evidence base in relation to early years education and childcare, it is often difficult to isolate the effects of non-parental day care from parental training and education. In addition, with a complex mosaic of provision, it is difficult to establish what works, for whom, in what circumstances.

9.6.1 Pre-school education (EPPE)

The Effective Provision of Pre-School Education (EPPE) project
This is the first major European longitudinal study of a national sample of young children's development between the ages of 3 and 7 years (beginning in 1997). A wide range of information has been collected on 3,000 children. The study also looks at background characteristics relating to parents, home environment, and pre-school settings children attended. Settings were drawn from a range of providers. All settings were in England. A sample of 'home' children (who had no or minimal pre-school experience) were recruited to the study at entry to school for comparison with the pre-school group.

As part of the wider study, the EPPE team conducted an investigation into children who might be 'at risk' of special educational needs (SEN). The Early Years Transition and Special Educational Needs (EYTSEN) project was a sub-study within EPPE. Focusing on children from ages 3-6, the study used a range of information to identify children 'at risk' of developing SEN.

What do we know about the effectiveness of pre-school education from the EPPE project (and EYTSEN subsample)?

- Duration of attendance is important: an early start (under age 3) is linked to better intellectual development. It does not appear to be important whether children attend full-time or part-time
- High quality pre-schooling is related to better intellectual and social/behavioural development for children
- Settings where staff have higher qualifications have higher quality scores, and children make more progress
- Disadvantaged children benefit significantly from good quality pre-school experiences, especially where they mix with children from different social backgrounds
- Integrated centres (combining education and care) and nursery classes are more effective than other types of provision in promoting positive child outcomes
- The quality of the home learning environment is more important for intellectual and social development than parental occupation, education and income
- The number of months a child attended pre-school continued to have an effect on their progress throughout Key Stage 1
- High quality pre-school provision, combined with longer duration, had the strongest effect on child development
- Those children who had no pre-school experience were more likely to be 'at risk' of Special Educational Needs, even taking into account this group's higher level of multiple disadvantage
- The form of pre-school provision may be important. Children 'at risk' of poor cognitive development benefited from integrated centres and nursery schools; children 'at risk' in terms of poor social behaviour benefited from integrated centres, nursery classes and playgroups

9.6.2 The High/Scope Perry Pre-school Study and other evidence from the US

The High/Scope Perry Pre-school Study
The study, which began in 1962, examined the lives of 123 African Americans born in poverty in a disadvantaged area of Michigan, and at high risk of failing in school. At ages 3 and 4, children were randomly divided into a programme group and a no-programme group, who received no preschool programme. The curriculum for the programme group included five key groups of experience (creative representation; language and literacy; initiative and social relations; movement and music; logical reasoning). Children followed the programme for two years and received intensive input from highly trained workers.

What do we know about the effectiveness of pre-school education from the Perry Study and similar initiatives from the US?

- The High/Scope Perry Pre-school Program is the best known and most influential of all preventative programmes. It has been the subject of high quality evaluation and is unique in following up child participants, not only to adulthood, but to middle age
- The programme evaluated successfully (in the short- and long-term) and its success is likely to be due to the broad focus of the curriculum
- The programme has been shown to cost-effective: the major cost is the initial investment, while the major benefits are reduced costs of education, increased earnings, and decreased costs of welfare assistance and crime
- Other US studies which have received rigorous evaluation have found positive effects on school and college attainment. Although there were variations in the implementation of key aspects of the interventions, over time participants' motivation and social skills reduced the impact on criminal justice services and improved health and job market performance
- Evaluation of the Seattle Social Development Project, which combined training to improve children's social competence and thinking skills with a parenting programme and classroom management programme for teachers (with promising long-term outcomes) highlighted the finding that a 'late intervention' programme did not produce the significant long-term effects achieved by the full intervention

Where is the evidence base weak?

- It is not clear whether outcomes for the most disadvantaged children matched those with fewer risk factors
- Since all the evidence comes from the US, it is not known whether these programmes would be transferable to the Scottish context

9.6.3 Systematic review of day care

A systematic review of day care for pre-school children in disadvantaged populations reported positive effects on mothers' education, employment and interaction with children (as well as an increase in children's IQ and beneficial effects on behavioural development and school achievement. Long-term follow up demonstrated increased employment, lower teenage pregnancy rates, higher socio-economic status and decreased criminal behaviour.
However, most of the trials combined non-parental day care with some element of parent training or education (mostly targeted at mothers) and failed to disentangle the possible

effects of these two interventions, among other methodological weaknesses. In addition, all the contributory studies were conducted in the US, so the transferability of findings to the Scottish context is uncertain.

9.7 The effectiveness of initiatives targeting vulnerable groups

Families facing the disadvantages associated with poor housing conditions, low income, unemployment or/and a lack of supportive relationships are vulnerable to a range of additional stresses, such as homelessness, and alcohol and drugs misuse. This is not intended to be a comprehensive investigation of all such groups, but to flag up some examples and indicate what is known, or where work is in progress. The actual groups included were suggested by colleagues who contributed to the paper. The review of services below provides a broader perspective of the circumstances of families from additional risk groups, although it has not been possible to separate out individual experiences.

9.7.1 A review of services for vulnerable families with very young children

A review of local authority and health services to support vulnerable families with children aged 0-3 years was carried out in Scotland in 2000-2001. The review examined the case records of 147 families with children aged 3 and under in touch with social work services. The majority of families were experiencing profound and acute stresses (such as mental illness, drug dependency, alcohol misuse or domestic abuse).

Although the review is now several years old, findings are still likely to be relevant. An extensive range of services was found to be offering practical help, information, parenting education and advice, and emotional support to parents in difficulty:

- The bulk of antenatal care and support was provided by ***midwives,*** most of whom perceived themselves as offering the same service to all new parents, regardless of specific risk factors
- The ***health visitor*** was the key contact with health services. Most families had a designated health visitor, although levels of contact varied widely from weekly to very limited contact. Health visitors did not have a clear sense of their responsibilities towards vulnerable families, and practice varied widely
- Most contact with ***other health services*** centred around diagnosis and treatment of the individual patient. Services rarely considered the family's wider circumstances, unless there was evidence of immediate risk to a child
- Most of the families had an allocated ***social worker,*** who carried out assessments of families' situations and made referrals to other services. Local authorities also provided families with material and financial help
- ***Family support workers*** offered practical advice and support to parents and sometimes offered respite by looking after children. These staff also played a part in monitoring children's development
- ***Out of hours or emergency services*** played a key part in dealing with crisis referrals. Out of hours staff were skilled and experienced and gathered a great deal of information and offered good professional insights into the supports needed. This contact was important in setting the context for families' further contact with daytime services
- ***Family centres*** brought together a range of practical, material and emotional supports for parents, usually underpinned by some form of child care

- ***Voluntary sector support*** included home visiting services; parents' support groups; child care and play sessions; advice, advocacy and emotional support for young homeless people or people leaving local authority care; and specialist assessment of families with complex needs for the local authority

What does the review tell us about local authority and health services supporting vulnerable families?

- A wide range of services was offering support to families, but support was poorly coordinated unless there was an inter-agency child protection plan or supervision plan in place. Children with physical or learning disabilities or sensory impairments were particularly poorly managed. The impact of the disability on the family as a whole was not taken into account in planning, and carers' needs were not consistently assessed
- The health professionals providing the bulk of antenatal care and support either did not have a clear sense of their responsibilities to vulnerable families, or perceived themselves as offering the same service to all new parents, regardless of risk factors
- Families and professionals feared that social work departments would permanently remove children from their parents' care, although this was not reflected in reality
- Negative perceptions of field social workers hindered families from seeking early help from social work services, but families with experience of support were more objective and realistic
- Parents valued health professionals who took time to discuss problems and were honest about the help they could offer – health visitors were particularly appreciated for the practical support and advice they provided
- Few parents had a consistent relationship with a named GP and contacts with GPs were described as hurried. Parents felt that GPs were too ready to prescribe tablets and unwilling to take time to listen to their problems and worries
- Parents were very positive about the support they received from family centres, particularly valuing respite, emotional support and advice and social support from peers
- Family centres provided safe environments for parents to acquire skills, build trusting relationships with staff and watch staff interacting with children. Parents wanted better information on a range of topics, specific provision for fathers, and additional support at evenings and weekends

9.7.2 People who are homeless, or at risk of becoming homeless

Many people at risk of homelessness lack the knowledge and skills required to manage a tenancy and the self-confidence and interpersonal skills necessary to communicate with agencies and develop social networks. Young people, care leavers, ex-offenders, ex-service personnel, people with low educational achievement and literacy problems are particularly vulnerable. However, at present the evidence base appears to be thin.

Research in 2001 to identify the range of life skills training provision available in Scotland found there was limited knowledge on the resettlement needs of many people (e.g. families, people from black and minority ethnic groups, women). Although life skills training appeared to be well embedded in homelessness provision, there were wide variations in the length of time that the training was provided to clients.

None of the projects surveyed submitted details of formal service evaluations. Consequently, there is very little evidence of the effectiveness of life skills training as part of the resettlement and tenancy sustainment process.

The Dundee Families Project
Run by NCH Action for Children Scotland, the project provides services for families who are, or who are at risk of, becoming homeless due to anti-social behaviour. A range of services are offered through: individual and couple counselling, family support and group work. The three main service types are:

- Outreach: a preventive service offered to families in their existing homes
- Dispersed tenancies
- Core: accommodation offered to the most needy families in a residential block for up to four families

What do we know about the effectiveness of the Dundee Families Project?

- The project worked with 126 families in 4 years (1996-2000), about half of all referrals to the project. Information on closed cases showed that the majority of families made good progress, particularly regarding housing issues; however, many still had serious childcare problems.
- Parents and young people were very positive about the service. Adults identified substantive changes in their housing situation, facilities for children, positive changes in family relationships and behaviour. Children and young people thought the staff were helpful and their housing situation improved. They identified improvements both in their own behaviour at home and school and in their parents'.
- Evidence suggests that the project generates cost savings, through stabilising families' housing situation, avoiding costs associated with eviction, homelessness administration and rehousing and, in some cases, preventing the need for children to be placed in foster or residential care
- Crucial ingredients of the service were: good management, stable staff, shared ownership by other agencies, a repertoire of challenging methods and a holistic approach.

9.7.3 Misuse of alcohol and other drugs

There is growing concern about the potential impact of adult problem drug and alcohol use upon children, the potentially high numbers of children involved and the need to ensure that child protection measures are in place when required.

What do we know about the effectiveness of interventions to address parental substance misuse?

- A range of services for children and families is developing, but there is a need for a continued expansion of such responses, and for their rigorous evaluation
- Studies which were able to demonstrate their effectiveness at improving children's risk and protective factors and behaviours were not able to clarify which resilience factors determine positive outcomes

Where is the evidence base weak?

- Research to date has failed to focus on children's views

- There is a need to view parental substance misuse as part of a far wider, multi-dimensional picture

9.7.4 Children at risk of neglect or acting beyond the role of their parents

Risk and protective factors for potential neglect are known to be similar to risk factors for potential disruptive behaviour, although evidence on the precise mechanisms of the inter-relationship is limited. Effective approaches to family service provision are highlighted in other sections of this paper, so the focus here is on compulsory mechanisms for parents.

Parenting Orders were introduced in Scotland in 2005, but have attracted harsh criticism and have been little used. Findings from England and Wales, where Parenting Orders have been established since 2000, indicate a degree of success in terms of attendance, but that families had histories of unsatisfactory contact with support agencies prior to referral for a Parenting Order. This raises questions as to whether, if such families had had access to such support before, they would have required the compulsory measure at all.

9.7.5 Looked after children

There is a gap in the evidence about effective interventions to support looked after children, both during childhood and early adulthood, when they are particularly vulnerable to early and unplanned parenthood. However, it is known that:

- Placement stability and encouragement of carers is important for achieving educational success.
- Education and employment prospects after the age of 16 can be improved by careful assessment of each young person's capabilities and by working with them to increase their employability

In Scotland, these messages are reinforced by findings from a recent major review and a qualitative research project

Many of the initiatives to avert pregnancy at a young age will be particularly relevant to young people who are, or have been, in the care system.

9.8 Investment in the early years – longer-term impacts

9.8.1 Costs and outcomes in services for children in need

A long-term approach to decisions on spending and service planning needs to be taken if resources are to be shifted towards intervention earlier in life and earlier in the development of problems for children who are at high risk. On the evidence of a programme of 14 studies carried out in England, each of which included an economic component that attempted to describe the way resources were used, or to link costs to the results achieved, the authors concluded that the most rational approach to decision-making is likely to depend on:

- Understanding the current position – including variations in how local authorities and partner agencies uses resources

- Planning and designing services – shifting resources from 'heavy end' higher-cost services to earlier, more preventative services
- Linking costs and outcomes – developing the kind of services that have the best chance of success, such as those targeting high risk children who are at a turning point or transition in their lives
- Improving information about what works – supporting research and evaluation and improving monitoring data

What do we know about the costs and outcomes of services for children in need?

- Tightly controlled interventions with a clear rationale tend to have better outcomes than less strictly controlled 'standard' interventions
- It is easier to improve outcomes for younger children than with older ones
- The evidence base is stronger for specialist programmes (usually targeted work with vulnerable families – such as intensive home visiting) than on universal family support services (such as Home-Start) but universal services that have been evaluated appear to be both relatively low cost and very well received

9.8.2 0-3: How Small Children Make a Big Difference

This paper, published in January 2007, takes a broad focus on the long-term impacts of addressing issues of parenting and care in the early years. The recommendations made by the paper are sweeping and do not seem to be particularly helpful, but the main, evidence-based messages are useful:

- Early engagement pays a very high rate of return. Growth modelling on early years investment by the Brooking Institute led to the conclusion that, in the USA 'using reasonable assumptions, we project that GDP would be $988 billion larger within 60 years' although, as yet, no one has modelled the dynamic and complex factors that would affect growth in the UK.
- If they receive sensitive care in the first 3 years, children will feel better in themselves, be more resilient and appreciate other people's feelings
- Costs should rise for screening and support during pregnancy, through to parenting and enrichment for children from 0 to 5, and again at 16-18 as more young people stay on at school. However, outcomes would start improving from primary year one, with children arriving at school with better behaviour, motivation and language skills
- Families and not schools are the major contributors to inequality in student performance
- Investment promotes economic growth by creating a more able workforce and reduces the costs borne by criminal justice, health and welfare system
- Remedial work for young people from an impoverished environment becomes progressively more costly the later it is attempted
- In the US a series of studies targeted at higher risk families followed up over time have estimated a payback of between 3 and 7 times the original investment by the time the young person reaches the age of 21. The most well known is the Perry Pre-School project, where groups have been followed up regularly, most recently at 40 years old.

9.8.3 The costs and benefits of early intervention

- Early engagement pays a high rate of return. High quality longitudinal research of an innovative initiative from the US (the Perry Pre-School Project) indicates major benefits to the criminal justice system, health, education, employment and income levels and a return of $17 dollars for every dollar spent by the time participants reached the age of 40
- However, it is risky to extrapolate from studies conducted 20 or 30 years ago (and outwith the UK). The problems of the children served are likely to be more severe and the definition of particular outcomes may have changed over time
- No one has yet modelled the dynamic and complex factors that would affect growth in the UK if greater investment was made in the early years.
- Evidence on the effectiveness of parenting interventions which focus on improving educational outcomes for children is inconclusive and further complicated by lack of rigorous evaluation of many interventions, and few examinations of costs and benefits. However interventions in this area may be low cost and so the benefit-cost ratio is likely to be positive
- Home visitation interventions show some benefits, although effects across a range of child outcomes are likely to be modest. Cost-benefit analyses of the Nurse-Family Partnership indicate that the programme is most effective when serving high-risk individuals, but would be cost-effective even if aimed only at low-risk families
- Evidence relating to the effectiveness of parenting interventions which focus on improving educational outcomes for children is inconclusive, and further complicated by lack of rigorous evaluation of many interventions
- There is strong evidence that parent training produces positive results in addressing child conduct disorder, although it is difficult to identify the key elements of programmes which achieve better outcomes for children
- Several studies (including recent evaluations of the *Incredible Years* programme in the UK) indicate that parent training can have positive impacts on both parents and children
- The cost of parent training is relatively low and the long-term benefits of parenting programmes need only be small to justify the investment

9.8.4 Creating and fostering non-violence in society

The WAVE Trust (Worldwide Alternatives to Violence) was formed to identify and disseminate best practices for creating and fostering non-violence in society, through a soundly-researched understanding of the root causes of violence. In 2005, the Trust published results from an eight year study of the root causes of violence. Main findings:

- Violence costs the UK more than £21 billion per annum. A tiny fraction of this is spent on prevention, and most of that on the least effective age groups (e.g. 5-15). Early interventions (0-3) are fruitful and cost effective. Negative cycles can be transformed and children given the opportunity to grow into contributing, personally fulfilled adults (and future parents)
- Violence is triggered in high-propensity people by social factors such as unemployment, poor housing, overcrowding, economic inequality, declining moral values and stress.
- Alcohol plays a significant role in the timing of violence

- Since these factors reflect long-term cultural trends that are difficult to reverse, investment in reducing the number of people with propensity to violence is a strategic imperative
- The structure of the developing infant human brain is a crucial factor in the creation (or not) of violent tendencies
- Empathy is the single greatest inhibitor of the development of propensity to violence. Empathy fails to develop when prime carers fail to attune with their infants
- Parent training has evaluated as highly cost-effective for preventing serious crime: £4,000 per serious crime prevented, compared with £9,000 for both teenage supervision and prison. Training carried out before children reach the age of five may be expected to compare still more favourably.

The WAVE Trust examined over 400 interventions that might reduce violence, or the root causes of violence. It identified 4 programmes as being of particular interest because of their focus on addressing core issues of empathy; intervening before the birth of the child; research evidence to support their effectiveness. Two of the programmes (the *Nurse-Family Partnership* and *PIPPIN*) have been discussed above. The other two are *The Circle of Security* and *Roots of Empathy*

The Circle of Security
This is a 20-week, group-based, parent educational and psychotherapeutic intervention designed to shift patterns of care-giving interactions in high-risk, caregiver-child pairs. High-risk families are identified and assessed by a university-based assessment team and Circle of Security therapists.

What do we know about the effectiveness of the Circle of Security?
- It appears from the references in the WAVE report that the programme is relatively recent, and it seems to be confined to the US at present.
- Early findings suggest that the intervention has:
  - Increased ordered child and caregiver strategies
  - Increased secure caregiver strategies
  - Increased secure child attachment
  - Increased caregiver affection, sensitivity, delight and support for exploration
  - Decreased caregiver rejection, neglect, flat affect and role reversal

Roots of Empathy (ROE)
This is a widely applied parenting programme for children aged 3-14 (not yet delivered within the UK). Its goal is to break the intergenerational cycle of violence and poor parenting. The WAVE research was particularly interested in ROE because of the ways in which it prepared schoolchildren for parenthood. It emphasises, models and provides literal hands-on experience of how to handle and interact with a real-life baby.

Children share in regular visits with a neighbourhood parent, infant, and trained ROE instructor. Over an 8 month period, students learn understand how babies develop. They become attached to 'their' baby, learning about its needs and interacting with it. The programme also links to the school academic curriculum: students use maths skills to measure, weigh and chart the development of the baby, and write and read stories and poems that tap and help them relate to their own emotions.

What do we know about the effectiveness of the Roots of Empathy programme?

- A number of projects have evaluated the ROE programme. Findings indicate that ROE children (relative to comparison children) demonstrated significant improvements from pre-test to post-test in the following areas:
    - Increased emotional knowledge
    - Increased social understanding
    - Increased pro-social behaviour with peers
    - Decreased aggression with peers
    - Decreased proactive aggression (e.g. bullying)

WAVE carried out an in-depth review of ROE and was highly impressed with the findings. The report does not discuss issues of transferability, although the Canadian-based initiative is now being piloted in Australia and Japan.

9.9 Conclusions

The evidence base on the effectiveness of interventions aimed at parents and children in the early years is extensive and, since it is children from the most disadvantaged sections of society who are most affected by these issues, there are important lessons for policy and practice. However, it is difficult to extract meaningful messages from the evaluation of initiatives which have focused on a range of outcomes and to ascertain whether findings are relevant to the most disadvantaged families.

Evaluation of interventions aimed at improving parenting and maximising the early development of the child indicate that outcomes tend to be less positive for the most disadvantaged families. Initiatives which aim to target all families in deprived areas, so as to avoid stigmatising families with the greatest number of risk factors, may not be reaching the most disadvantaged families (or, at least, are not reporting whether and how they are engaging the most disadvantaged families).

There is good evidence to show that home visiting programmes during pregnancy and the first year of life allow a range of issues to be addressed, support provided and, if appropriate, referrals and access to other services to be facilitated. However, families who are hard to reach by traditional services may feel more comfortable with volunteers from their own community. Initiatives which engage mothers within the community and train them as 'experts' help to build capacity within the community, in addition to supporting other mothers. Mothers targeted by the intervention may find it easier to trust their peers. However, not all evaluations of the use of volunteers have been positive, and it is important that volunteers receive appropriate training and support in their role.

Parent education programmes have been shown to have positive child outcomes, although effects are not universal and the most disadvantaged families are least likely to benefit. However, programmes have been effective in boosting parenting skills, increasing knowledge and improving parents' mental health. Evidence of effectiveness relating to three specific parenting programmes is building, although further, good quality, independent evaluation of the Triple P, Incredible Years and Mellow Parenting programmes would be helpful.

Looking beyond services to support parents and children, the evidence indicates the importance of using mass media programmes to promote positive images of parenting, as well as individual issues such as breastfeeding. Universal low cost approaches that help to build the bond between parent and child (such as baby massage and improvements to baby buggy design) are non-stigmatising ways of improving outcomes for the most disadvantaged groups.

Provision of adequate education on sex and contraception has been shown to be effective in averting pregnancy at a young age but, again, the most vulnerable groups are least likely to engage with educational systems. Tapping into the popularity of computer games may be a way of engaging young people in games which involve the care of young babies. An initiative involving a computerised model baby appears promising, when included as part of a curriculum of lessons on relationships and personal development. However, it has yet to be evaluated in the UK.

There is clearly a major economic imperative to address issues of parenting and care as early in life as possible. The evidence suggests that investment in screening and support during pregnancy, and parenting and care until children are 5 years old pays off almost immediately as children are better prepared when they arrive at school. Subsequently they are likely to achieve better qualifications and to gain and sustain employment, with savings to the health, welfare and criminal justice systems.
However, most of the evidence relating to long term impacts of investment in the early years comes from the US, and findings are unlikely to be transferable. There is a need for good quality, longitudinal studies based in Scotland.

Despite a number of weaknesses and gaps in the evidence base, there is increasing evidence that investing in the early years (and focusing on young people while they are at school to promote sexual health and prevent early pregnancy) can have long term benefits and, ultimately, play a significant role in reducing health inequalities.

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