Overview:
While most of the major drivers of the distribution in health lie outside of the NHS, it does still have an important role to play. Interventions delivered early in life (even prenatally) do, indeed, have great potential for reducing health inequalities.

The problem is that interventions which are effective in improving health and life chances overall will not necessarily reduce inequalities in health unless careful steps are taken. This is because more advantaged groups find it easier to access programmes and make changes themselves without support, and because they are easier for health and other professionals to reach [1]. This means that a reduction in health inequalities is likely to require intensive, targeted intervention directed at those who are most vulnerable, and to take account of possible barriers such as lack of time, finance and coping skills, delivered within the context of proportionate universalism which may mitigate the risk of highly targeted work normalising the multiple risks, hazards and problems which the intervention is likely to be trying to allay [1-2].

It should also be born in mind that higher level interventions, most of which will not be administrable under the NHS, for example improved nursery school provision, may be particularly effective in improving the health of the most disadvantaged children. Key guidance and review papers published in recent years include: Macintyre’s review of inequalities in health in Scotland which identifies which kind of policies are most likely to reduce them [1], the Marmot review which does the same for England [2], and NICE guidance on social and emotional wellbeing of vulnerable children aged under 5 years, which outlines the role of the NHS in supporting home visiting, childcare and early education interventions [3].

Research currently being undertaken within the Institute of Health and Wellbeing at the University of Glasgow will certainly help answer the questions posed by the consultations: we provide a summary below; we would be happy to engage with the committee further should more detail be helpful.

How effective are early years interventions in addressing health inequalities?
Parenting programmes are one of the key ways of intervening in early life [4]; there is an extensive body of high quality research evidence which demonstrates the effectiveness of particular parenting programmes in improving health and other outcomes for both parents and children [5-8].

However, four important, and related, gaps remain in this evidence. First, few studies pay attention to the issue of reach - the proportion of a target group which actually gets the programme. Second, few studies have considered whether programmes actually recruit and retain the parents and children in the most disadvantaged positions who are likely to need them most [9]. Third, we do not fully understand how and why some early intervention programmes
which work on average for disadvantaged families do not work for the most disadvantaged. Finally, few studies have long term follow-up. We just don’t know how long the effects of a programme persist. The next generation of studies needs to focus on unpacking how, precisely, the evidence based interventions work, and for whom, and to build on the existing, but relatively small, evidence base around long-term outcomes, cost effectiveness and the challenges of reaching the most vulnerable.

Two randomised controlled trials, at the Institute of Health and Wellbeing, University of Glasgow, are evaluating early interventions targeting the most vulnerable groups in our society. The first evaluates two evidence based parenting programmes; the second focuses on an assessment and treatment programme for families in which child maltreatment has occurred.

(i) The Children, Young People, Families and Health Programme of the Medical Research Council/Chief Scientist’s Office Social and Public Health Sciences Unit, Institute of Health and Wellbeing, is rigorously evaluating two early years parenting interventions through the THRIVE trial. Led by Dr Marion Henderson, THRIVE is a three arm randomised controlled trial funded by the National Institute for Health Research from 2013-2017; recruitment of mothers has just started. Preliminary findings will be made available throughout the trial, with the main outcomes likely to be published in 2017 [10].

The theoretical basis of the interventions is that women vulnerable in pregnancy are more likely to be anxious and depressed and to produce a higher level of stress related hormones that have been shown to be damaging to their foetus[11]. Thus, intervening ante-natally may be optimal [12-15]. The trial will compare the cost effectiveness of Enhanced Triple P for Babies, Mellow Bumps, and Care As Usual, as delivered within the NHS in Greater Glasgow and Clyde and Ayrshire and Arran, in improving both mother-child interaction and maternal mental health.

The primary research questions that will be addressed by THRIVE are:

1) Do participants receiving Enhanced Triple P for Babies or Mellow Bumps show significantly lower anxiety, depression and outwardly directed irritability compared to those receiving Care As Usual when their babies are 6 months old?

2) Do women who receive Enhanced Triple P for Babies or Mellow Bumps show more sensitive interactions with their babies compared to those receiving Care As Usual when their babies are 6 months old?

THRIVE and ancillary projects will also allow us to better understand a number of areas on which evidence is currently sketchy including:

- Whether, and how, such group based parenting programmes work for mothers with particular vulnerabilities;
- Whether, and how, more skills based or more therapeutic intervention is most effective for particular parents;
- The role of fathers in parenting interventions and in understanding child and mother outcomes;
- Whether parenting interventions designed for vulnerable populations delivered within the NHS can successfully recruit and retain the women they are designed to reach during the antenatal period.

ii) The Mental Health and Wellbeing Group, Institute of Health and Wellbeing, is rigorously evaluating the New Orleans Intervention Model through the Best Services Trial, funded by the Chief Scientist’s Office and NSPCC. The New Orleans Intervention Model was developed in the United States and is an infant mental health service targeting families whose children have just come into foster care because of maltreatment. The New Orleans Intervention Model is being compared with enhanced services as usual – a social work based assessment service. Since the trial started, all children aged 0-5 coming into an episode of foster care because of maltreatment in Glasgow are offered a specialist assessment.

The theoretical basis of the New Orleans Intervention Model is that if families who have maltreated their child are to be able to change enough to safely have their children home, they need to own the fact that they have maltreated their child and work to build more positive attachment relationships. For maltreated children, the most important intervention may be the provision of a safer and more nurturing home environment: research on sensitive periods in neural development suggests that addressing inadequate care in the early months and years of life may improve neural circuits underpinning emotional regulation and allow maltreated children to reach their full developmental potential [16].

We are currently planning a multi-centre version of the Best Services Trial that will ask the questions:

1. Does the New Orleans Intervention Model improve the mental health of young children coming into an episode of foster care?
2. Is the New Orleans Intervention Model cost-effective compared to usual services?

In addition to these Randomised Controlled Trials, a systematic review of interventions that encourage parents to reflect on their own experiences of being parented is also being conducted as part of the work of the Children Young People Families and Health programme. The review aims to elucidate issues around context, mechanism and outcomes and how these three factors are related in understanding the effectiveness (or not), and for whom, of interventions which use such reflection as a way of bringing about behaviour change in participants’ own parenting behaviour.
Further, the Measuring Health programme of the Medical Research Council/Chief Scientist’s Office Social and Public Health Sciences Unit is evaluating the effectiveness and cost effectiveness of the Health in Pregnancy Grant. This was a universal payment of £190 made to women who had reached the 25th week of pregnancy and had received health advice from a midwife or doctor. The grant was designed to provide additional financial support in the last months of pregnancy towards a healthy lifestyle including diet, and it was suggested that the link to the requirement for pregnant women to seek health advice from a health professional may provide a greater incentive for expectant mothers to seek the recommended health advice at the appropriate time. The grant was introduced for women with a due date on or after 6th April 2009 but was subsequently withdrawn, the last payments being made to women who had reached the 25th week of pregnancy by 1st January 2011.

The evaluation is focusing on differences in birth-weight for babies born to those mothers who were eligible for the Health in Pregnancy Grant with babies born before the Health in Pregnancy Grant was introduced or after it was withdrawn. Specific questions the research project will address are:

1) Were there differential impacts of the intervention for particular subgroups defined by socioeconomic (both area deprivation and individual occupational social class), demographic (marital status, age, maternal height), or obstetric (parity, previous Caesarean section) factors, or for selected combinations of these groups?

2) Was the Health in Pregnancy Grant cost effective? How did cost-effectiveness vary across important subgroups identified as having differential outcomes?

The evaluation of the Health in Pregnancy Grant will result in recommendations regarding the appropriateness of reintroducing the Health in Pregnancy Grant. If shown to be effective and cost-effective, recommendations on whether the payment should be made to all women, as before, or targeted at certain groups with the intention of reducing inequalities in birth-weight and other outcomes will be made. The main results are likely to be available in autumn 2015.

What role can the health service play in addressing health inequalities through interventions in the early years?

The health service continues to play an important role. The THRIVE trial will identify many of the barriers and challenges in delivering antenatal parenting programmes for vulnerable mothers, and Best Services Trial is already helping us understand much about the delays and barriers that prevent young maltreated children getting the nurturing care they need in order to reach their full developmental potential.

Are there any specific initiatives or research evidence from Scotland, UK or internationally that you would wish to highlight to the Health and Sport Committee?
The Children Young People Families and Health programme has explored possible mechanisms for child health inequalities using observational data from the Growing Up in Scotland study. Some inequalities in five year olds’ health and health related behaviours are associated with differences in parenting behaviours, controlling for household adversity [5]. Further research is investigating whether parenting practices help to explain the emergence of a social class gradient in Body Mass Index status between 4 and 6 years.

The Institute of Health and Wellbeing has also been exploring inequalities in mental health in all preschool children in Glasgow City for the past five years, using Strengths and Difficulties Scale. Since 2013, all children in P3 and P6 in Local Authority schools in Glasgow City have also been assessed using the same scale. The evidence has demonstrated significant inequalities in the areas of social, emotional and behavioural difficulties. By P3, children were significantly more likely to have difficulties in social, emotional, and behavioural development if they were male, had been ‘Looked After’ at some point in the first four years of life, were in a school with a higher level of children eligible for Free School Meals, and if they had experienced difficulties in development at preschool. Furthermore, the evidence suggests that inequalities in such problems widened in the first three years of school, with the proportion of children from the most deprived quintile of area deprivation in Glasgow increasing from 7.1% to 12.1%, whilst children in the least deprived areas started with much lower levels of difficulties (2.9%) and remained at this level [17]. In 2016 (funding dependent) the research will be able to explore what happens to this cohort of children when they reach P6. It is hoped that eventually this will be able to be linked to school exam data and leaver destinations, in order to assess the impact of such difficulties for Glaswegian children.

Research by the Measuring Health programme using the Aberdeen Children of the 1950s study has identified both socio-economic context (primary school & neighbourhood) and composition (individual and family) in early life as important indicators for adult health, even after accounting for current social position [ref]. This means that the way individuals are grouped within schools and neighbourhoods is important over and above individual characteristics alone. This research showed the family was also influential on adult health and mental wellbeing.

**Concluding remarks**

Research clearly shows that early intervention is important in addressing health inequalities but now we need to focus on the mechanisms through which effective interventions appear to work in vulnerable populations [18]. A stronger evidence base in this area is needed, requiring rigorous evaluative work with regard to implemented interventions. These should elucidate which intervention components are critical to effective programmes and the contextual factors necessary for them to work, thus clarifying requirements for scaling up while addressing inequalities. The current focus on the early years as a policy priority in Scotland has a strong rationale on which laudable policy measures and practice have been based, but its success in addressing health inequalities needs to be closely monitored and explored. Early years
interventions should not be regarded as a panacea; investment in higher level alternatives, probably not administered through the NHS, is crucial in improving the health of the most disadvantaged children.

Institute of Health and Wellbeing, University of Glasgow
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Appendix

References


**Contributors**

This submission was written by Dr Katie Buston, with contributions from Dr Marion Henderson, Professor Alastair Leyland, Louise Marryat, Dr Helen Minnis, Professor Laurence Moore, Dr Alison Parkes, Professor Daniel Wight and Professor Sally Wyke, Institute of Health and Wellbeing, University of Glasgow.