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Financial Scrutiny Unit Briefing

Preventative spend – literature review

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To inform its inquiry into preventative spending, the Finance Committee asked the FSU to "produce a briefing outlining briefly the theoretical debate on preventative spending and setting out key examples, both from within the UK and abroad, of where preventative spending has been shown to be effective in the areas of health, education and justice."

This briefing summarises some of the literature on preventative spending in various countries and draws out examples that are considered best practice. It also summarises some of the cost-benefit studies that have been undertaken on preventative policy measures before concluding with some suggested areas members may wish to pursue in the course of the Committee inquiry.

The Scottish Parliament
Pàrlamaid na h-Alba

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EXECUTIVE SUMMARY

The Finance Committee's recent Budget Strategy Phase (BSP) report concluded that despite the budgetary challenges faced by the Scottish Government, longer term preventative actions should "not be forgotten". The Committee subsequently agreed to undertake an inquiry with the following remit:

> "To consider and report on how public spending can best be focussed over the longer term on trying to prevent, rather than deal with, negative social outcomes. The Committee is particularly interested in specific, practical evidence from the UK and abroad of how preventative spending has been effective."

This briefing considers the literature on "preventative" interventions by Government and draws out some examples of programmes which have been deemed to be successful. Whilst acknowledging that transferring these examples from different jurisdictions to a Scottish context might not always be feasible, the briefing identifies "best practice" from around the world to inform members during the course of their inquiry.

The briefing also looks at some of the cost-benefit analyses of preventative Government interventions, which tend to have greater prominence in policy considerations during periods of fiscal consolidation. Cost-benefit analyses of some preventative interventions are complex as the benefits often take years to materialise and therefore require many years of longitudinal follow-up analysis. In addition, there may be many causal reasons behind an outcome – not just the Government intervention. Cost-benefit studies, therefore, must be taken with a degree of caution, but are extremely useful to policy-makers in determining where the greatest return from investment may be achieved. One example of a longitudinal study currently taking place in Scotland is the "Growing up in Scotland" (GUS) study which will monitor and evaluate experiences of childcare, education, social work, health and social inclusion. This study should help in the development of a key preventative activity of government, namely early years policy.

The briefing also considers some Scottish Government policies which might be considered "preventative" and concludes with some themes which members may wish to consider over the course of the inquiry.

INTRODUCTION

For the purposes of the Finance Committee inquiry, preventative spending is defined as being public spending over the longer term that aims to prevent rather than deal with negative social outcomes. One example of this which the Finance Committee explored in its recent Budget Strategy Phase was early years interventions intended to prevent possible negative social and health outcomes in later years of life. Examples of negative social outcomes in Scotland are our higher rates of drinking and substance abuse compared with the rest of the UK and other countries; our relatively high prison population as a proportion of the total population; our lower life expectancy than the rest of the UK as well as the large discrepancy in life expectancy within Scotland, with parts of Glasgow having particularly low life expectancy (Walsh, et al 2010).

As we move into a period of fiscal retrenchment in Scotland and the UK, some have speculated that unless there is clear evidence that spending on prevention (which intuitively seems sensible) is cost-effective, it might be under threat (See Community Care, 3 June 2010, *Can preventative services survive?*). Bill Howat, in evidence to the Finance Committee's Budget Strategy Phase, said that preventative spend is easier "in a benign fiscal environment", rather than at the current time (Scottish Parliament Finance Committee 2010b). In the short-term cycles in which political debates take place, it can sometimes be difficult to shift spending priorities in a longer-term direction, when the benefits of doing so might not appear until years or generations later. This is especially the case in a difficult budgetary context.

Some have also argued that there are institutional barriers to the creation of a more preventative culture in Scotland – particularly in the field of early years interventions. Alan Sinclair in his paper for the Work Foundation (2007) argues that "an interplay of institutional and economic factors has robbed children from the womb to the age of five of appropriate respect and attention." He continues:

> "In a shared house the washing up tends to accumulate in the sink because it is no one's responsibility to do it. Similarly, reducing stabbing in Glasgow and other major cities is not the primary responsibility of the hospitals, schools or police. Likewise, universities, secondary and primary schools are only responsible for improving the education of the young people once they come through their door. They are not charged with increasing the intellectual and behaviour capacity of our community as a whole. All of these institutions would appreciate the benefits of better parenting and early year enrichment but it is not their responsibility. As with the tenants and the dirty crockery, no single institution of local or central government has had a prime responsibility or treated parenting and early year enrichment as a priority.
>
> The collective benefits of getting it right from conception to five have not been realised over time, because, on an institutional scale, 'It is not my job.'"

As such, Sinclair argues, there is no public or political clamour to prioritise early years interventions in the political discourse of Scotland, resulting in priority in spending terms going to areas with groups able to pull political levers, like the over-60s (who tend to vote more than younger members of society), universities, local authorities and the health sector. For example, the public will protest to politicians at an increase in anti-social behaviour in their neighbourhood, but will not hit the streets to argue for early years funding. "Nor will you find under-fives taking to the streets or threatening to withhold their baby-teeth smiles" (Sinclair 2007). Sinclair is essentially arguing that we as a society are spending more on dealing with problems when they arise as opposed to preventing them from occurring in the first place.

Much of the literature on “prevention” focuses on early years interventions, reflecting a belief that the greatest impact can be achieved through intervention at this stage of life, rather than at a later stage once problems have already begun to emerge. These early years interventions are considered as contributing to cross-cutting beneficial outcomes across a range of policy areas, from health to justice to economic development. This briefing looks at some examples of best practice in preventative interventions from around the world.

Scottish Parliamentary consideration of preventative spending/interventions

Education Committee: Early Years report 2006

In 2006, the Scottish Parliament’s Education Committee (2006) undertook a study into Early Years which concluded:

> “Early years services must be a priority for investment as they provide major and direct positive impacts on society. Sound services can enhance children’s development and later educational attainment, identify and support vulnerable children and families as early as possible, combat poverty, promote social inclusion and support the continuing growth of the economy.”

Finance Committee: Budget Strategy Phase

In its recent Budget Strategy Phase (BSP), the Finance Committee heard evidence about the benefits of “early years” interventions as a mechanism for improving social outcomes in the medium to long term. The Committee report made the following recommendations:

> “The Committee considers that the importance of longer-term approaches to public spending should not be forgotten even when faced with immediate challenges and invites the Scottish Government to explain how it will continue to direct its spend towards more preventative programmes. (Paragraph 101)

In response to this recommendation, the Scottish Government said:

> “The Scottish Government welcomes the announcement of the Committee's inquiry into preventative spending. The Scottish Government has for some time been leading a considerable body of work across a range of public services looking at what are often referred to as early or preventative interventions, including in health, social care and education.

Problems in attributing outcomes to preventative spend

Before summarising examples of best practice, it is important to highlight some of the difficulties in attributing outcomes and financial savings from preventative spending. For example, in the area of early years which is discussed in more detail below, younger children receive many different formal and informal services simultaneously, making it extremely difficult to attribute which services have contributed to a particular outcome. It is also very difficult to tell what would have happened to an individual in the absence of a particular intervention – for example, a particular outcome may have been achieved in the absence of an intervention.

The other policy challenge cited in the literature on preventative spending is the challenge of transferability. Whether the evidence comes from Scotland, the US, or Scandinavia, transferability between jurisdictions is always going to present certain challenges in the sense of

whether it is applicable in a different political and cultural setting – this is a challenge for many areas of public policy. Indeed, even within Scotland findings from cases in the central belt may not be appropriate in the highlands and islands, and findings which seem to bring positive results for the majority of the population, may be less successful when applied to minority groups.

These caveats are not intended to detract from the evidence base in support of many preventative public policy interventions. They are presented for Committee members to bear in mind when considering the evidence they will receive during the course of their inquiry into preventative spending.

EARLY YEARS INTERVENTIONS TO IMPROVE SOCIAL OUTCOMES

Early years interventions could be seen as being the most significant area where preventative investments impact on individuals and society. The literature on the benefits of early years interventions focuses on the benefits that accrue to individuals throughout life, to other areas of social policy and to the wider economy. For example, good habits picked up early in life can impact on reducing the future cost of ill-health to the NHS and lost economic output; can reduce the chances of at risk individuals being involved in crime and potentially going to prison with its associated costs; and can impact on the quality of learning and skills held by individuals with resulting productivity implications for society.

This section of the briefing identifies some key studies which have been used as the policy evidence base to justify investment in early years provision throughout the world.

Early years literature review

Professor Edward Melhuish, of the University of London, produced a literature review for the National Audit Office in 2003, which looked at international evidence of early years interventions and found the following characteristics of early years provision to be the most important in enhancing children's development:

1. Adult-child interaction that is responsive, affectionate and readily available
2. Well-trained staff who are committed to their work with children
3. Facilities that are safe and sanitary and accessible to parents
4. Ratios and group sizes that allow staff to interact appropriately with children
5. Supervision that maintains consistency
6. Staff development that ensures continuity, stability and improving quality
7. A developmentally appropriate curriculum with educational content

The Melhuish study also looked at the cost-benefit analysis literature which suggests that a targeted approach to early years provision for disadvantaged families is more effective than universal interventions across the entire population spectrum. The literature reveals a high rate of return when early years interventions are targeted at disadvantaged families, however:

> "the applicability of these indications of savings to the general population is open to considerable doubt in that so much of the benefit in these studies of disadvantaged populations derives from reductions of negative outcomes e.g. crime, remedial education, unemployment, where the incidence of these negative outcomes is dramatically less in the general population and therefore the scope for savings is similarly dramatically less."

Studies: High Scope/Perry Pre-School Project

The most internationally renowned research studies on early years provision are American projects which began in the 1960s and 1970s, for example the High Scope/Perry Pre-School Project. Long term follow-up studies of these have shown significant benefits in terms of both improved life chances for individual children and return on government investment.

High Scope/Perry Pre-school project

Commencing in the 1960s, the High Scope/Perry Pre-School project involved an intensive programme to 123 three and four year old children from disadvantaged backgrounds in Michigan. Highly trained and well-paid teachers delivered the programme for five half-days per week, supplemented by 90-minute weekly home visits. By age 27, the long-term benefits of the intervention showed: reducing school drop-out, reducing drug use, reducing teenage pregnancy, enhancing employment, reducing welfare dependence and reducing crime. A follow up of the participants when they reached 40 years of age showed that those who had been on the programme were less likely to have been arrested. Men in the programme who graduated from high school earned more than those who had not been through the programme – a similar pattern existed for women but the discrepancy was less than it was for men.

Effective Provision of Pre-School Education (EPPE)

The Effective Provision of Pre-School Education (EPPE) research project was a longitudinal study of 3,000 children in England, between the ages of 3 to 7 years, and showed that those who attended a pre-school setting made more developmental progress (cognitive and social-behavioural) than those with no pre-school experience. The main findings of the study were as follows:

Impact of attending a pre-school centre

- Pre-school experience, compared to none, enhances children's development
- The longer the duration in pre-school, the better the intellectual development and improved independence, concentration and sociability
- Full-time attendance led to no better gains than part-time attendance
- Disadvantaged children in particular benefit significantly from good quality pre-school experiences, especially if they attend centres that cater for a mixture of children from different social backgrounds

The quality and practices in pre-school centres

- The quality of pre-school centres is directly related to better intellectual and social/behavioural development in children
- Good quality can be found across all types of pre-school. However, quality was higher overall in integrated settings, nursery schools and nursery classes
- Settings that have staff with higher qualifications, especially with trained teachers show higher quality, and their children make more progress
- Where settings view educational and social development as complementary and of equal importance, children make better all round progress

The EPPE study also found that supporting parents was important, and that the quality of the home learning environment is more important for intellectual and social development than

parental occupation, education or income. This was supported by the findings of the Peer Early Education Partners (PEEP) project that worked with parents of children aged 0-5 years and focused not only on “reading readiness”, but also social, emotional, self-esteem and parenting skills. It puts the adult/child relationship “at the core of learning”. An evaluation of children’s progress over 6 years found that “findings strongly support existing evidence that....effective early interventions lead to improved cognitive and social skills for pre-school children, particularly those at risk of low educational attainment” (Evangelou et al, 2005).

Surestart evaluation

Sure Start Local Programmes (SSLPs) were set up as community based, multi-agency projects in some of the most disadvantaged areas in England. The aim of the intervention was to improve the well-being, attainments and life chances of all children aged 0-4 years old in the area and to support their families. An evaluation (Anning et al 2007) of the Surestart scheme in England found that there were varying degrees of effectiveness of schemes and it was not just about having an early intervention project, but about having the right project. The key findings of the evaluation were as follows:

- Proficient and effective SSLPs took a holistic approach to implementing the Sure Start vision.
- They built on the strengths of inherited provision and were creative in improving and setting up services.
- What worked at strategic level was:
  - systemic, sustainable structures in governance and management/leadership;
  - a welcoming, informal but professional ethos;
  - empowering parents, children and practitioners.
- What worked at operational level was:
  - auditing and responding to community priorities in universal services;
  - early identification and targeting of children and parents to benefit from specialist services;
  - recruiting, training and deploying providers with appropriate qualifications and personal attributes; and
  - managing the complexities of multi-agency teamwork.
- However, overall “reach” figures were disappointing. Those who used services often used several, and reported satisfaction with them. But services offered at traditional times and in conventional formats did not reach many fathers, black and minority ethnic families and working parents. Providers found barriers to attracting “hard to reach” families difficult to overcome.
- Few programmes demonstrated proficiency in (1) systematically monitoring, analysing and responding to patterns of service use or (2) 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.

Case Study: The Netherlands

The most recent UNICEF study of child wellbeing in OECD countries ranks the Netherlands as the highest scoring for child wellbeing, with the UK at the bottom of the table (UNICEF 2007 – see Annex 1 for rankings). This case study looks at some of the early year services in place in the Netherlands.

Parent support services

There are several key messages about how parent support is conceptualised; viewed in policy terms; and implemented in practical programmes:

There is an overall **national policy framework** which supports families through universal provision of health, education and welfare services (including benefits) as well as support activities. The policy agenda is the responsibility of the **Ministry for Children** which has introduced a strategic plan for children and families. This includes extending **Children and Family Centres** to every neighbourhood (to be set up by the 530 local authorities but bringing public and voluntary sectors together).

The 12 regional authorities are responsible for implementing and funding specialist **Youth Care Agencies** as a single point of access for all children and carers with pressing problems or enquiries.

Parent support programmes are based on positive prevention and problem intervention. The preventive approach is used more with parents of younger children and the problem focus for parents of older children and young people although there is an increasing emphasis on improving more general support for all families. Many programmes are adapted from UK and US programmes but there are distinctive approaches such as supporting ethnic minority groups or encouraging readiness for school.

Kraamzorg **(**Maternity Nursing Care)
"Kraamzorg" is one of the key support programmes for new mothers in the Netherlands – for both first time and subsequent births. It is significant that this system of support has been in place for decades and is taken for granted by Dutch families as a high quality service which everyone would use. Essentially, the system is designed to support families in the period immediately after birth – for up to ten days – or longer where it is needed. A major difference from the support offered by midwives in the UK is that there is a cadre of trained professionals who are NOT midwives but have their own status as maternity carers who look after mothers and new babies – AND other members of the family including fathers and other children. Their main focus is on settling in the baby and mother to family life and they help with feeding, bathing and routines for the baby; looking after the mother's personal care needs as well as offering social-emotional support and advice; and in cases where it is needed, preparing meals for the rest of the family and generally keeping the household running. Families can choose whether they wish to have an all-day service or a part-time service with two visits per day – a long visit of several hours in the morning and a pop-in visit later in the day. Any strictly medical problems are referred to a health professional such as the GP or midwife. It is partly because of this kind of support that the Netherlands maintains its reputation for safe home deliveries and also widespread use of the 'polyclinic' where women go into hospital only for the actual birth of the baby and return home in a matter of hours. The emphasis is on childbirth as a part of family life, not a medical condition, except in cases of specifically identified need. As a universal service, there is no stigma attached and mothers from all walks of life are very positive about the help they have received from this service.

The Consultatiebureau (Mother and Well-Baby Clinic)
Following on the immediate support after birth, there is a well established network of clinics where families can have their babies' development monitored and receive advice on general issues about feeding, growing and stimulating as well as dealing with any problems which arise. It says something of the atmosphere created by the professionals in the clinics and general attitudes in Dutch society that something like 97% of families make use of these services and it is only in cases where there may be other problems that they are not taken up. The issue of accessibility does not arise.

The 'Brede School' (Community Schools)
The concept of the Brede School is rather different from that of the community school in the UK. It is based more on the idea of a one stop centre promoting the co-operation of all services dealing with children and families with schools as the lead agency. In this regard, Brede Schools are more akin to the aims of the development of integrated children's services, as opposed to schools which provide out-of-school activities generally aimed at involving young people in leisure activities. The aim is that this co-operation should result in improved growth and development of children and young people. It has been part of the range of provision in different places since 1998 and is based mainly in primary schools. Each programme is different as they are intended to be responsive to local needs, taking into account what parents and children themselves want. Other partners include the pre-schools, social welfare agencies, sports programmes, child public health and arts organisations for example. Target groups for the broad range of activities on offer include children and young people, parents, neighbours, volunteers and other community groups with their own particular interests.

Source: Department for Children, Schools and Families (2009)

Cost Benefit analysis

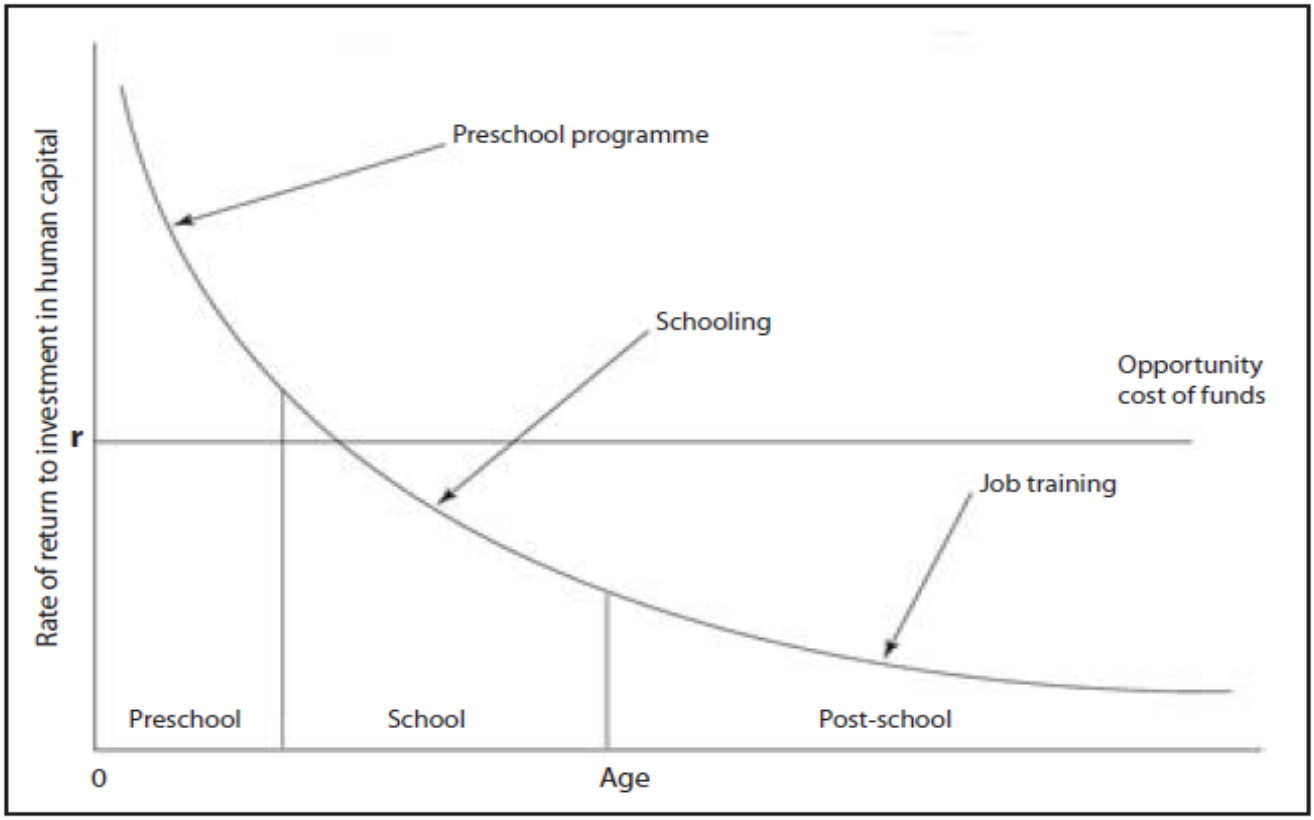
The costs and benefits of preventative measures can be difficult to identify because the outcomes may have occurred due to a number of factors (not necessarily the intervention), and also because assessing the benefits requires follow-up research over many years. There have, however, been some studies attempting to quantify the social and economic benefits of preventative policies, particularly in the field of early years and its impact on life outcomes.

The economic benefits of investment in the early years have most famously been advanced by Nobel prize winning economist, James Heckman, who has argued that returns from investments made in early years greatly outweigh those made in any stage of education (school or tertiary) and that an "optimal investment strategy is to invest less in the old and more in the young". He tied his work specifically to a Scottish context in his report for the Fraser of Allander series of 2004. In a lecture to coincide with the paper he said:

> "A major determinant of successful schools is successful families. Schools work with what parents bring them. They operate more effectively if parents reinforce them by encouraging and motivating children. Job training programmes, whether public or private, work with what families and schools supply them and cannot remedy twenty years of neglect....skill formation policy should be based on this basic principle."

As part of this study, Heckman used figure 1 (below) to show the rate of return on money invested in education between the ages of 3 and 22.

Figure 1: Rates of return to human capital investment



Source: Heckman and Masterov, 2004

This graph neatly articulates the arguments made by advocates of early years investment. The horizontal axis represents age and the vertical axis represents the rate of return to investment assuming the same investment is made at each age. All things being held constant, the rate of return on a pound of investment made while a person is young is higher than the rate of return to the same pound made at a later age.

Following the logic of the Heckman study, attempting to reverse problems in education becomes more expensive the later they are attempted. According to another Heckman study (Heckman 2006) successful early interventions are self-perpetuating and he argues for early investment in children, particularly disadvantaged children, on economic efficiency grounds.

> "Early interventions have much higher returns than other later interventions such as reduced pupil teacher ratios, pubic job training, convict rehabilitation programmes, tuition subsidy (at university) or expenditure on police."

Work by the American RAND Corporation has undertaken research on the costs and benefits of early childhood programmes. It summarised (see table 1) the child outcomes that may be affected by early childhood programmes and the associated monetary savings to government.

Cost-benefit analysis

Studies into the outcomes from preventative interventions often cite positive cost-benefit analyses as being the main reason for committing spending in prevention. As the name suggests cost-benefit analysis focuses on the ratio, and monetary values, of benefits to costs for any given policy. A simple comparison can be made with the monetary return on an investment in the financial and commercial sectors. However, working out costs and benefits for a piece of social policy is a far more complicated procedure.

A social cost-benefit analysis of a policy generally takes the following into account:

- All costs to society (set-up costs, bureaucracy costs, added inconvenience to population, etc)
- All benefits to society (costs to society of not introducing policy)
- Opportunity costs – (the sacrifice that has to be made when choosing to do one thing over another)

A recent example of a cost-benefit analysis of a preventative scheme is in the analysis of Birmingham City Council's Total Place pilot, an early intervention programme for children. The cost-benefit model for the pilots shows a cost of £41.7 million and a benefit over 15 years of £103.5 million (see Can preventative services survive *Community Care journal*, June 2010))

Table 1: Potential Monetary Savings (or costs) from Affected Child Outcomes

Effect on Child Outcome	Monetary Benefits (or costs) to Govt
Reduced child maltreatment	Lower costs to child welfare system
Reduced child accidents and injuries	Lower costs for emergency room visits and other public health care costs
Reduced incidence of teen childbearing	Lower costs for public health care system and social welfare programmes
Reduced grade repetition	Fewer years spent in primary and secondary education
Reduced use of special education	Lower costs for special education
Increased high school graduation rate	(More years spent in primary and secondary education, i.e., drop-out rate reduced)
Increased college attendance rate	(More years spent in post-secondary education)
Increased labour force participation and earnings in adulthood	Increased tax revenue
Reduced use of welfare and other means-tested programmes	Reduced administrative costs for social welfare programmes; reduced welfare programme transfer payments
Reduced crime and contact with criminal justice system	Lower costs for the criminal justice system
Reduced incidence of smoking and substance abuse	Lower costs for public health care system and from premature death
Improved pregnancy outcomes	Lower medical costs from fewer low birth weight babies

Source: Rand Corporation 2008

In terms of costs and benefits from specific programmes, table 2 summarises RAND research which examined 9 early childhood programmes or groups of programmes in the United States, including programmes that provide parent education or home visiting and those that combined parent education or home visiting with early childhood education. The table includes summary information on the programme, the age at last follow-up for each programme, data on costs and benefits and net programme benefits (benefits minus costs). The final column shows the benefit-cost ratio for each programme – for example, with the HIPPY USA scheme, for every $1 spent, there was a return of $1.80.

Table 2: Cost and Benefits of Selected Early Childhood Programmes

Programme (and description)	Age at last follow-up	Programme cost ($)	Total Benefits to society ($)	Net Benefits ($)	Benefit-cost Ratio
Comprehensive Child Development Programme (CCDP): *Case managers provide coordinated services to low-income families with children under 5*	5	37,388	-9	-37,397	-
HIPPY USA: *Paraprofessionals provide home visits to disadvantaged families with children ages 3–5*	6	1,681	3,032	1,351	1.80
Infant Health and Development Programme (IHDP): *Home visiting and center-based child development programme for low birth weight babies from birth to age 3*	8	49,021	0	-49,021	-
Nurse-Family Partnership: *Public-health nurses provide home visits to low-income first-time mothers from prenatal period to age 2*	15	9,118	26,298	17,180	2.88
Home visiting for at-risk mothers and children (meta-analysis): *Average effect across 13 home visiting programmes*	Varies	4,892	10,969	6,077	2.24
Abecedarian Programme: *Comprehensive, centerbased child development programme for at-risk children from infancy to age 5*	21	42,871	138,635	95,764	3.23
Chicago CPC: *Center-based, one- or two-year part-day academic-year preschool programme with parent participation*	21	6,913	49,337	42,424	7.14
High/Scope Perry Preschool Project: *Centerbased, one- or two-year part-day academic-year preschool programme with home visiting*	40	14,830	253,154	238,324	17.07
Early childhood education for low-income 3-and 4-year-olds (meta-analysis): *Average effect across 48 preschool programmes*	Varies	6,681	15,742	9,061	2.36

Source: RAND 2008

The main points which might be taken from table 2 are as follows: (RAND 2008)

- First, that early childhood programmes can produce benefits that offset their costs but that not every early childhood programme does so. Seven of the nine analyses found benefit-cost ratios greater than 1, implying that the benefits outweighed the costs, with a

range between $2 and $17 in benefits for every dollar invested. However, even for those programmes with positive net benefits to society as a whole, when viewed from the government's perspective, not all programmes generate net savings sufficient to offset a full public sector investment in programme delivery. Future research needs to identify the features of cost-effective programmes.

- Second, some of the variation in benefit-cost ratios results from differences in the length of follow-up for the programme evaluations and the range of outcomes measured in the evaluations. Higher benefit-cost ratios are associated with programmes that have the longest follow-up, such as the Perry Preschool Project, which has followed a group of participants to age 40. The lack of positive net benefits for two of the programmes is because there were no significant improvements in the outcomes measured (CCDP) or because the favourable effects were for outcomes that could not readily be expressed in dollar terms (IHDP).
- Third, the findings show that a spectrum of programme types generated payoffs: small-scale, model programmes and larger-scale programmes that have been implemented for several decades; very expensive and intensive programmes and less expensive ones; and early education programmes (i.e. centre-based preschool programmes) and home visiting ones.
- Fourth, there is evidence that returns from early childhood programmes decline under certain conditions. For example, while monetary payoffs may still be positive for universal programmes, the rate of return may be higher when programmes are targeted toward the groups likely to benefit from them most. This is in line with the Melhuish literature review summarised above.

There is recognition in the literature on early years that reaping the monetary payoffs of early childhood services is tied to the quality of those services. However, although raising the quality of early childhood services in the public or private sector may be appealing to policymakers, features associated with higher quality almost always require more resources. So with no increase in funding, a shift toward higher quality may entail a reduction in services offered.

The conclusion of the RAND (2008) research to the findings of the cost-benefit analyses is as follows:

> "…the fundamental insight of economics in discussing early childhood–programme quality is that **there is generally a quality-quantity trade-off in early childhood services unless budget outlays grow** (RAND 2008). Given the need to allocate scarce resources, how can policymakers decide who should benefit from their policies? Should they choose families or taxpayers, for example? And there is also the question of whether the policy time frame should be short or long."

Given the conclusion of the RAND study, that higher quality early years interventions will require more resource, how might this be funded in Scotland at a time when budgets are scarce? Alan Sinclair (2007) suggests that "there is a strong case for police and criminal justice, health and education budgets to be reconfigured to meet early years costs as, in time, their budget areas will be the major beneficiaries". However, the counter-argument to this is that given the long lead in time for the accrual of pay-off from early years spending, how might any reconfiguration of such budgets address the immediate demands on services? These are all matters members will wish to consider during the course of the inquiry, and are discussed in more detail below.

Spillover Benefits and Beneficiaries

Often evaluations of early years interventions focus on the outcomes for the participating children. However, there are also benefits felt by parents of children or even descendents of participants. Other spillovers from interventions may generate public benefits, like savings to the

Government in the form of reduced outlays for “reactive” programmes or services, or additional revenues via higher taxes paid.

Case study example of positive spillovers
Where an early childhood intervention programme results in a reduction in child mistreatment, it generates lower costs for child welfare schemes and lowers the tangible and intangible costs to victims of abuse.[1] The savings in child welfare costs benefit the Government (e.g. taxpayers), and the participants who experience less child abuse receive the gains from lower victim costs. Improved outcomes for participants of the intervention programmes mean that when they become parents, they may be less likely to mistreat their own children. Hence, the potential for inter-generational positive spillovers (Wolfe and Havemen, 2002. Quoted in Karoly, et al, 2005).

The literature on preventative spend is dominated by examples that focus on early years interventions as the main preventative measure that can achieve benefits that cut across the policy areas of improved health, less crime, better economic activity rates and so on. However, there are examples of other preventative measures that have occurred which were not purely focused on early years.

PREVENTATIVE INTERVENTIONS IN HEALTH POLICY

In the 1960s, Finland had high rates of coronary heart disease and amongst the lowest life expectancy in the OECD. The North Karelia Project, launched in 1972, was a preventative intervention designed to reduce the risk factors in the population of North Karelia and was formulated and implemented to carry out a comprehensive intervention via local community organisations and individual action. GPs, schools, libraries, local media and supermarkets were all involved in the scheme whose core message related to changing lifestyle choices, such as not smoking, doing more exercise, eating more fruit and vegetables, etc. Families affected by premature death and heart disease were convinced that by changing lifestyles, their health and wellbeing could be improved. The implementation of the project resulted in significant savings in health expenditure, and coronary heart disease mortality rates in the North Karelia male population reduced by 82% in 2002 compared with the pre-programmes years. In the 1980s the scheme was replicated throughout Finland which resulted in coronary heart disease mortality among men falling by approximately 75% (Puska 2002).

The North Karelia project is the kind of project people tend to think of when they think of health prevention, but preventative health measures go beyond individual eating and living habits and involve a more holistic approach to health. Public health has been defined as “the science and art of preventing disease, prolonging life and promoting health through the organised efforts of society” (Acheson Report 1988). Key determinants of health are complex and varied but may be divided into the following (SPICe 2002):

- **Fixed** – for example, genetic disorders, gender and ageing
- **Social and Economic** – for example, poverty, employment, education
- **Environmental** – for example, air quality, housing, water quality
- **Lifestyle** – for example, diet, exercise, smoking
- **Access to services** – for example, NHS, social services, transport

Public Health theory would say that the “prevention” of ill-health works at the primary, secondary and tertiary level, where primary refers to preventing the onset of disease, secondary would be trying to target early disease detection and tertiary would be to reduce the impact of established

[1] Tangible costs for victims are things like costs of medical treatments, lost work time and other such costs. Intangible costs for victims include the type of costs that impact on an individuals quality of life – for example, pain and suffering.

disease (SPICe 2002). Examples of the types of Scottish policies that might be classed as "primary prevention" are:

- The smoking ban and raising the purchase age for tobacco
- Alcohol licensing laws
- Childhood vaccinations
- Health protection activities to prevent the spread of communicable disease, for example, the flu pandemic strategy
- Ante-natal care
- The Health inequalities strategy
- Towards a mentally flourishing Scotland
- Environmental health, for example, air and water quality legislation/standards
- Free fruit in school, free school meals

PREVENTATIVE INTERVENTIONS IN JUSTICE POLICY

The costs of crime in societies throughout the world are well rehearsed. These include the costs associated with the criminal justice system – police, courts, prisons and rehabilitation facilities as well as the costs to the victims – but also the less tangible costs to civic society with impacts on economic development, business, social and cultural life. Preventions aimed at reducing the costs associated with crime are a crucial element of public policy. Policy often focuses on early years interventions as being the key impact point for reducing an individual's propensity for criminal activity later in life, so many of the studies mentioned earlier in this briefing will have relevance to crime prevention policy. Examples of other schemes in Scotland which are aimed at preventing crime are as follows:

- CashBack for Communities is a programme of diversionary activities for young people to increase the opportunities they have to develop their interests and skills in an enjoyable, fulfilling and supported way, using funds recovered from criminals.
- The Violence Reduction Unit (VRU) was established in 2005 by Strathclyde Police and the Unit's remit was extended in 2006 by the then Scottish Executive to create a national centre of expertise on tackling violent crime. The Scottish Government currently sponsors the VRU through its Drugs and Community Safety budget.
- The Community Initiative to Reduce Violence (CIRV) was launched in the east end of Glasgow in 2008 and seeks to intensively engage with over 700 identified gang members and provide them with a range of support services and diversion projects in an effort to change their behaviour and lives. The Violence Reduction Unit is leading this project and the Scottish Government has already committed £1.6 million to the project with a further £3.4 million funding provided in services and in kind by partners.
- The No Knives, Better Lives campaign is a Scottish Government-led initiative which challenges attitudes to knife carrying amongst young people in Scotland. The Government has committed £500,000 to the campaign which was launched in Inverclyde in 2009. Recent press reports suggest that knife carrying in the area has fallen by 23% following the introduction of the initiative.
- The Violence Reduction Unit also supports Medics Against Violence, a charity set up by three Scottish surgeons which encourages medical professionals to be involved in violence prevention work. It currently operates a schools programme which sees volunteer health care professionals deliver anti-violence lessons in schools. Lessons are targeted at S2 pupils, and are designed to engage with pupils before they get involved in serious knife crime, but use some graphic images not suitable for younger pupils.

- Knife Licensing Scheme. From 1 June 2010, all dealers in knives are required to hold a knife dealers licence under the Civic Government (Scotland) Act 1982. The intention behind the scheme is that it will make it harder for knives to fall into the wrong hands.

One scheme attempted in the US aimed at reducing re-offending and the need for building new prisons by tackling the root causes of crime. The state of Texas Justice Reinvestment programme redirected half the money planned for new prisons to an expansion of residential and out-patient treatment centres for mental health, substance misuse and post-prison support. The scheme resulted in a stabilising of the prison population at a cost of $241m, and saved $210.5m in 2008-09, with additional savings of $233m from averted prison building.

SCOTTISH GOVERNMENT EARLY YEARS POLICY

The Scottish Government's Early Years Framework (Scottish Government 2009a) recognises the importance of early interventions as being the key preventative action that Government can take in improving a range of social outcomes. It points to much of the literature summarised in this paper, regarding the long term benefits of effective interventions.

> "What happens to children in their earliest year says much about our society and is key to outcomes in adult life. This is now supported by a wide range of research evidence from education, health, justice and economic experts. This framework at its simplest is about giving all our children the best start in life and the steps the Scottish Government, local partners and practitioners in early years services need to take to start us on that journey."

The Scottish Government has opted for an outcomes based approach to early years – giving responsibility to local authorities to deliver the Early Years Framework according to their own local needs via the Single Outcome Agreements. In terms of measuring progress, the Scottish Government has indicated that success will be measured against outcomes and relevant indicators, rather than on implementation of specific actions. In terms of the Indicators that the Scottish Government considers relevant to the Early Years Framework, the following table provides the latest snapshot of Scottish performance based on the existing data on the Scotland Performs website.

Table 3: National Indicators Relevant to Early Years Framework and current performance

Relevant National Indicators	Current Performance
Increase the proportion of schools receiving positive inspection reports	
Increase the overall proportion of area child protection committees receiving positive inspection reports	
Reduce the number of working age people with severe literacy and numeracy problems	
Improve people's perceptions of the quality of public services delivered	
Decrease the proportions of people living in poverty	
60% of children in Primary 1 will have no sign of dental disease by 2010	
Increase the proportion of pre-school centres receiving positive inspection reports	
Improve the quality of healthcare experience	
Reduce the rate of increase in the proportion of children with a body-mass index outwith a healthy range by 2018	
Reduce the % of adult population who smoke by 22% by 2010	
Increase population of school-leavers from Scottish publicly funded schools in positive and sustained destinations (FE, HE, employment & training)	

 indicates performance improving
 indicates performance worsening
 indicates performance maintaining
 indicates performance data currently being collected

Table 3 shows that of the 11 relevant national indicators, performance is improving in 4, performance is being maintained in 3 and performance data is being collected for 4 of the relevant national indicators. The types of indicators in table 3 vary: some cover areas where short-term impact could be expected, while some are longer term; some have specific targets attached to them and some do not.

One longitudinal study looking at the outcomes from the Scottish Government's early years interventions is the Growing up in Scotland project, commissioned in 2003, which intends following up on a sample of children in Scotland from infancy to their teens. The findings of this study, which intends to monitor and evaluate experiences of childcare, education, social work, health and social inclusion, will assist in informing early years policy in Scotland in future.

Another Scottish Government initiative in the area of early years is the recent announcement that former Health Minister, Professor Susan Deacon, will lead a "wide-ranging, national dialogue on how best to take action to improve children's early years of life." The work will have the following remit:

- Lead a dialogue to build on the broad areas of agreement across Scotland and Scottish life which exists regarding the critical importance of children's early life experiences and our shared responsibility to invest in their future; and, in particular, to encourage participation by elected representatives, business and the third sector
- Examine what more we can do in Scotland to ensure that children from all backgrounds and circumstances get the best possible start in life by considering how parents, families and communities; employers and businesses; civic and voluntary organisations as well as national and local government and our public services can pool efforts to achieve this
- Challenge the link between poverty and lack of attainment and achievement, focusing on the need to create in children a readiness to learn and prosper no matter their social circumstance
- Assist in building a public consensus around the link between how we prioritise investment in the early years and months of children's lives and how Scotland prospers as a nation;
- Bring forward, before the end of 2010, suggestions for practical action
- Intensify this effort across Scotland within the context of unprecedented pressures on public expenditure.

SCOTTISH SPEND

One of the caveats outlined at the start of this briefing was the difficulty in attaching savings from particular interventions. It is also extremely difficult to attach a precise figure to how much the Scottish Government spends on preventative interventions and dealing with negative social outcomes. In terms of resources spent on prevention, the Early Years Framework states that it is difficult to assess precisely how much Scotland currently spends on early years. The Framework states that "around £300m per annum is spent on pre-primary education and childcare, several hundred million on the early stages of primary, and £350m on maternity services". There are other preventative interventions taken by the Scottish Government and covered above in areas of Justice (Violence Reduction Unit, etc) and Health (ante-natal care, vaccinations, etc).

Scotland also spends large amounts of money on areas that might be deemed to be "reactive spending". In 2010-11, the Scottish Government allocated £485.9m to the Scottish Prison Service; £266.8m to Police Central Government and £586.7m to Police grants to Local Authorities; it allocated £47.4m to the Courts Group; £86.5m to Criminal Justice Social Work (£m) (Scottish Government 2009b). These are all spending areas where savings might be made in the long term if more effective preventative interventions were undertaken.

Striking the correct balance between reactive and preventative spend will be a key focus of the Committee's inquiry. The Scottish Government acknowledges in its Early Years Framework the difficulty in redirecting resources to longer term preventative interventions, especially when that might be at the expense of responding to current needs. The Framework states:

> "We do not underestimate the challenge of reallocating resources while continuing to help those who need our support now; but we believe that it is essential that we strive to do so."

Members may wish to explore the above dilemma and the following themes during the Committee's inquiry.

- The evidence that shifting budgets to more preventative interventions pays back in the medium to long term
- The evidence from elsewhere of budgets being reshaped due to evaluations of preventative spend
- The benefits of targeting interventions at disadvantaged groups as opposed to providing more universal interventions
- How Scottish budgets might be reconfigured (for instance health, criminal justice and education as suggested by Alan Sinclair, see above) in a way which does not adversely impact the meeting of current demands
- How, during a period of budgetary consolidation, resources are allocated on essential as opposed to desirable areas of activity
- What barriers to a preventative spend approach might be encountered, and how these might be overcome
- How the budgetary process might develop to better accommodate a preventative spend approach.

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ANNEX 1: UNICEF RANKINGS FOR CHILD WELL-BEING IN OECD

The chart below presents the findings of this *Report Card* in summary form. Countries are listed in order of their average rank for the six dimensions of child well-being that have been assessed.[1] A light blue background indicates a place in the top third of the table; mid-blue denotes the middle third and dark blue the bottom third.

		Dimension 1	Dimension 2	Dimension 3	Dimension 4	Dimension 5	Dimension 6
Dimensions of child well-being	Average ranking position (for all 6 dimensions)	Material well-being	Health and safety	Educational well-being	Family and peer relationships	Behaviours and risks	Subjective well-being
Netherlands	4.2	10	2	6	3	3	1
Sweden	5.0	1	1	5	15	1	7
Denmark	7.2	4	4	8	9	6	12
Finland	7.5	3	3	4	17	7	11
Spain	8.0	12	6	15	8	5	2
Switzerland	8.3	5	9	14	4	12	6
Norway	8.7	2	8	11	10	13	8
Italy	10.0	14	5	20	1	10	10
Ireland	10.2	19	19	7	7	4	5
Belgium	10.7	7	16	1	5	19	16
Germany	11.2	13	11	10	13	11	9
Canada	11.8	6	13	2	18	17	15
Greece	11.8	15	18	16	11	8	3
Poland	12.3	21	15	3	14	2	19
Czech Republic	12.5	11	10	9	19	9	17
France	13.0	9	7	18	12	14	18
Portugal	13.7	16	14	21	2	15	14
Austria	13.8	8	20	19	16	16	4
Hungary	14.5	20	17	13	6	18	13
United States	18.0	17	21	12	20	20	–
United Kingdom	18.2	18	12	17	21	21	20

OECD countries with insufficient data to be included in the overview: Australia, Iceland, Japan, Luxembourg, Mexico, New Zealand, the Slovak Republic, South Korea, Turkey.

Source: UNICEF 2007

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