Tackling Health Inequalities in Scotland: an Innovative Approach to Implement the 'Early Years' Policy into Practice

J. Rankin, S. MacInnes, R. Lyness, A. Armstrong, G. Queen and S. Stewart

Abstract - **Major health inequalities existing across the world and are often closely linked with degrees of social disadvantage. Scotland is fully committed to tackling this major challenge of health and social inequalities. One key focus is ensuring that every child and young person has equal access to opportunities and health improvements. This is supported by a series of national guidelines and 'early years' policy drivers. To implement these policies in practice, one National Health Service (NHS) health board (Lanarkshire) in collaboration with the University of the West of Scotland (UWS), adopted an innovative approach to develop the Best Possible Start (BPS) program of focused activity to reshape *'early years'* services and ways of working. The foundation for the program was the national transformational initiative '*Getting it right for every child* (GIRFEC)'. This is based on the belief that the developments of the child and their experiences in the early years have a major impact on the child's future life chances. The early nurturing environment is seen crucial in influencing emotional attachment. The BPS program focused on reshaping and streamlining the related health services in the *early years* between preconception and early school years. This is incorporated in the universal pathway of care encompassing all 'early years' services and related professionals. This universal pathway of care is underpinned with evidence based practice, workforce development, building research capacity and influencing leadership in the workplace. This paper presents a detailed overview of the BPS program including the structure, strategic aims and the rationale underpinning the pathway of care.**

Keywords- Getting it right for every child, GIRFEC; early years health policies; early nurturing; health inequalities; policy into practice; implementing early years policy.

I. Introduction

Major health inequalities still exist across the world leading to premature death and people living restricted lives [1,2]. Many people worldwide, with the biological capacity to be healthy, are currently living with poor health due to personal circumstances [2]. Circumstances relating to where people are born, grow, live, work and the fundamental drivers of health and health inequity [2,3]. Health inequalities are often closely linked with degrees of social disadvantage and this does exists both within countries and between countries [2,3]. A female born today can expect to live for more than 80 years or only for 42 years depending on the country of birth. In Scotland, the stark reality is that lifespan of individuals can differ by almost 30 years depending on where the individual was born and lived as a child. If this is in a Glasgow suburb then the child can expect to live 28 years less than another child living only 13 kilometres away [4].

Social and health inequalities remain major challenges in Scotland with every generation, past and present, having experienced poverty and inequalities [5]. Despite a recent decline in the levels of child poverty in Scotland, there remains on average one in five children continuing to live in poverty. The reality is that, many children are still held back in all aspects of their life by social inequalities, poverty and deprivation [6]. These children and young people are more vulnerable than their peers to a range of negative outcomes and are at a greater risk of being dragged into a cycle of deprivation and poor health outcomes, with little or no hope of a positive future [7]. This can be clearly seen on the health, safety, personal achievement and educational attainment of children and young people's [8]. It is now beyond question that a healthy and happy childhood is the crucial cornerstone in securing a positive future and success throughout life. Whilst this is the case for many children in Scotland, life for other children today is clearly difficult and complex [9].

Scotland has now set clear national challenges to reduce poverty, and social and health inequalities. Key

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aspirations include having a healthy generation of children and young people who are fully supported to become confident, successful individuals and responsible citizens [10,11,43]. Achievement of these national aspirations will take both a strategic focus and a concerted effort with related services and agencies. Clear national guidance to reduce inequalities and improve national health focuses on recognizing and valuing diversity and by the provision of person-centred, clinically effective and safe care, for every person at all times [12]. Scottish Government is committed to achieving this goal and has substantially invested across relevant social, health and education sectors. This is supported by a series of national guidelines and policy drivers to focus the development of relevant services at strategic and operational levels. The key theme across all areas is to tackle and reduce inequalities to ensure that every child and young person has equal access to opportunities and health improvements [7,11].

- *Influencing National Drivers and Legislation*

The *Early Years (EY) Framework* is focused on the inequalities experienced in the first few years of life and helps to redress the inequalities this causes in later life [13-15]. The transformational initiative *Getting it Right for every Child* (GIRFEC) builds on, and is reflected in, a wide range of policies and strategies for all children and young people including those who may have additional support needs [16,17]. The GIRFEC values and principles developed, build from the Children's Charter [18], and reflect relevant legislation and policies including the United Nations Convention on the Rights of the Child [19], the Early Years framework [14,15], and Curriculum for Excellence [20]. The principles of GIRFEC and the national GIRFEC practice model form the foundation of the BPS program, which is overarched by the *early years* framework and the multi-agency *early years* collaboration.

Scotland, a small country with 14 National Health Service (NHS) health board areas, provides health and related services to a population of over 5 million. Using a proactive approach, one NHS health board (Lanarkshire) collaborated with the University of the West of Scotland (UWS) to plan the most appropriate way to implement the *early years* policies in practice. This health board, with a population around 562,500, annual birth rate of 6,500 and 65,000 children currently within related *early years* services, has areas of poverty and deprivation including some of the most deprived areas in Scotland [21]. In collaboration with UWS, the health board launched the funded Best Possible Start (BPS) program in October 2012 to tackle reducing inequalities in line with national policies and changing legislation. Figure 1 presents the key national guidelines and early years related policies.

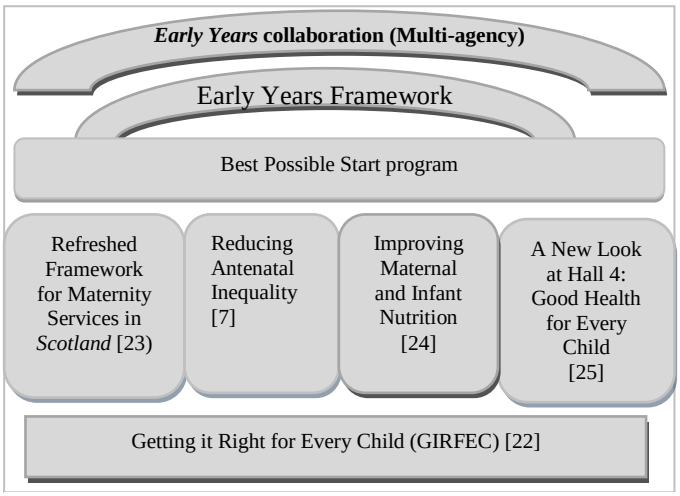

Figure 1. Policies and guidelines influencing the BPS program

ambitious approach in the redesign of service provision across the health board services. Program development was funded for 2 years with a further year for completion of research and evaluation activity. The purpose was to develop a program of activity that would feed into and inform the work of the *early years* collaboration.

This paper presents an overview of this innovative program including the structure, strategic aims and the rationale underpinning the development of the pathways of care.

II. STRUCTURE AND PURPOSE

A robust planning and implementation infrastructure supported program development. The role of the program board was to manage and provide a strategic overview of the joint collaborative program and oversee the implementation and review of BPS. Membership included representation from NHS health board, primary care, UWS, local council and the third sector (voluntary organizations and agencies). The program structure included four themed subgroups each with key operational objectives and terms of reference. The structure is presented in Figure 2.

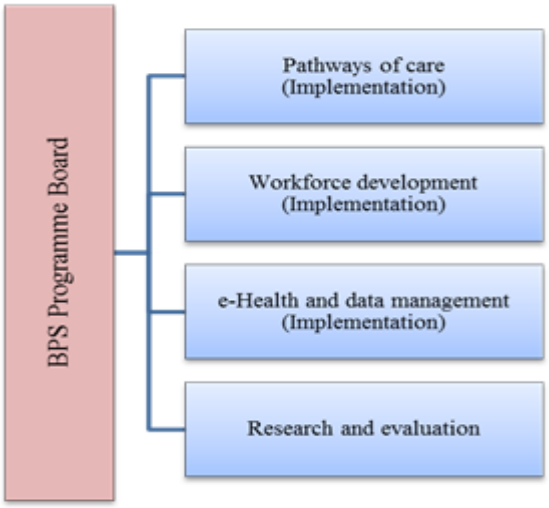

Figure 2. Structure of the BPS program board.

Three implementation subgroups included i) Pathway of care, ii) workforce development and iii) electronic (e)-Health and data management. These were supported by iv) the research and evaluation subgroup. A number of additional short-life groups operated in the context of implementation to ensure program action plans and timescales were met.

A program manager was seconded from clinical practice to lead the operational aspects of the program and to align the strategic planning arrangements within the health board and UWS. Program development incorporated and built on good practice across Scotland in relation to existing systems, practice and professional cultures [21]. This funded initiative was recognized to be the 'starting point' only for the implementation of the 'early years' policies and guidelines. Developments and activities then subsequently informed the related national 'early years' activity. Long-term commitment to follow up and sustain activities in this initial program would be necessary to influence changes in behaviour and monitor outcomes.

A full day event for the *early years* workforce launched the BPS program and provided background and initial plans. Senior managers contributed and were present throughout the event. This was a key factor in promoting and supporting the implementation of the BPS program for the *early years* workforce. It also provided opportunities for specialist practitioners to raise awareness and promote their services. Awareness of the BPS program to clinicians continued through a range of different methods with the communication strategy sharing information and keeping the workforce updated of activities, training and events.

III. PATHWAY OF CARE

The purpose of this key subgroup was to develop a safe and effective, person-centred universal pathway of care from pre conception to age eight years for pregnant mothers, children and families. The redesign focused on providing a range of services which identified need and provided anticipatory care to the most vulnerable children and families. Figure 3 presents the range of services involved and Box 1 details the specific outcomes of the subgroup.

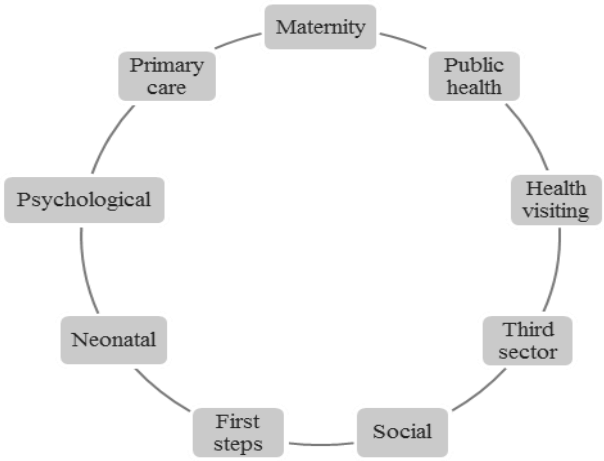

Figure 3. Services involved in the reshaping of *Early Years* provision

The pathway demonstrates the application of the GIRFEC practice model and encompasses different models of practice for example, 'Family nurse partnership', 'First steps' service provision and tiered universal service delivery (progressive universalism). Senior staff and managers provided leadership for the implementation of changes in systems, practice and culture required within and across agencies. Strategic and operational plans supported the transition of services and staff.

A. *Underpinning rationale*

Preconception and early conception are vitally important periods of significant fetal development. These are times when fetal development is most vulnerable to the impact of adverse maternal biopsychosocial circumstances - maternal stress, use of tobacco, drugs and alcohol and poor nutrition [26-30]. A healthy maternal diet is key to optimal fetal growth and development particularly in early pregnancy [24]. Adolescent mothers are known to be more likely to have low birth weight

babies and other poorer neonatal outcomes than adult mothers. Emerging evidence clearly shows that the early nurturing environment has an impact on the developing brain and also influences emotional attachment [28,31].

Box 1. Specific outcomes guided by national policies

- Provision of tailored, accessible and asset based support, information and advice to affect behavioural change.
- Early assessment using the GIRFEC practice model.
- Access to maternity care by 12 weeks gestation (specific focus - under 20 years living in most deprived quintiles).
- Integrated care planning and integrated service planning.
- Improved engagement of vulnerable women and families.
- Increased post birth contraception.
- Optimal management of clinical and psychosocial need in pregnancy, labour and in the postnatal period.
- Continuity of care and carer.
- Implement Family Nurse Partnership for vulnerable pregnant adolescents.
- Implement of 27-30 month universal child health surveillance review.

In the first few years, children develop physically, cognitively and emotionally more rapidly than at any other time in their lives. The development of the child and the child's experiences, between birth and early school years, has a major impact on the child's future life chances [32]. Disadvantages experienced from birth adversely impact on the life chances of children [33,34]. In relation to cognitive and social development of children in the first three years of life, studies have shown differences between children which is linked to deprivation [35,36]. The child brought up in a stable and nurtured environment is better placed to succeed in life which is in contrast to the child brought up in a less secure background [9]. These fundamental factors were crucial to support the GIRFEC principles and were fully embedded throughout the service redesign. Promoting 'early nurturing and attachment' in the universal pathway is an integral theme from preconception, through the antenatal period and into the early years.

One key planning area was to effectively adopt and share the ten core components and set of values and principles within the GIRFEC approach (see Box 2). Incorporating these brought meaning and relevance at practice level to single-agency, multi-agency and inter-agency working across all children's services within and across agencies. To be effective, this involved practitioners consistently putting children and families at the centre of care and using common tools, processes and language. In line with GIRFEC, this shared approach and accountability was essential to involve services and agencies working effectively together. The purpose included: getting children and young people the help they needed when they needed it; building solutions with and around children, young people and families; and supporting a positive shift in culture, systems and practice.

The universal pathway had three underpinning principles, based on GIRFEC principles and using available evidence.

i. Early intervention and prevention: breaking cycles of poor outcomes.

ii. Building on the assets of individuals and communities: moving away from a focus on deficits.

iii. Ensuring that children and families' needs are at the centre of service design and delivery.

Box 2. Core components of GIRFEC

These are applied in any setting and in any circumstance.

1. A focus on improving outcomes for children, young people and their families based on a shared understanding of wellbeing.
2. A common approach to gain consent and to share information where appropriate.
3. An integral role for children, young people and families in assessment, planning and intervention.
4. A co-ordinated and unified approach in identifying concerns, assessing needs, and agreeing actions and outcomes. *These are based on the Wellbeing Indicators presented in Table 1.*
5. Streamlined planning, assessment and decision-making processes that lead to the right help at the right time.
6. Consistent high standards of co-operation, joint working and communication where more than one agency needs to be involved, locally and across Scotland.
7. A *Named Person* for every child and young person, and a *Lead Professional* (where necessary) to co-ordinate and monitor multi-agency activity, [37].
8. Maximising the skilled workforce within universal services to address needs and risks as early as possible.
9. A confident and competent workforce across all services for children, young people and their families.
10. Capacity to share demographic, assessment, and planning information electronically within and across agency boundaries, [10].

B. Antenatal services

Improving universal antenatal care and supporting women with multiple and complex health and social care needs does help to improve the health of newborns and pressures on neonatal services as well as later outcomes [22]. Therefore it is essential for those involved in antenatal services to actively engage with women early in

pregnancy. This is particularly important for those women, deemed at *high risk* due to medical, obstetric and social reasons, to get access to the care they may need [38,39]. In these cases, problems can be addressed through early access and engagement. Antenatal programs effective in improving maternal and infant outcomes include pregnancy and early newborn screening, social and lifestyle behaviour and maternal and infant nutrition [40].

A range of initiatives and activities were implemented within the maternity services to take account of this available evidence. This included social marketing campaigns to increase the number of women accessing the antenatal services in pregnancy, parenting initiatives including weight management, the promotion of breastfeeding, healthy eating and cooking skills for vulnerable adolescents and the increase in use of long acting reversible contraceptives for vulnerable women. The key focus was on promoting attachment and bonding during pregnancy and after childbirth and midwives, using motivational interview skills to provide person-centred care and promoting healthy lifestyle changes.

C. Health visiting services

The health visitor is a key provider of universal services in the early years within their local communities. They have a key role in child surveillance, assessment and identification of need with early intervention for children and families. National guidance focuses on three main aspects of health service delivery to children and their families in the early years [41]. This includes i) the allocation of the *health plan*, ii) the reintroduction of the 27-30 month child health review and iii) providing health improvement information and advice.

Child surveillance focuses on assessing the development of the child in line with the expected milestones for development at each stage of childhood. The 27-30 month child health review was recently re-introduced as part of the national child health surveillance for all children [42]. This is a key assessment to review all the parameters of the child's development for example physical growth, communication (speech and language), cognitive and emotional development.

As children and young people develop, some may have temporary difficulties, live with challenges and / or experience more complex issues [43]. Health visitors identify and address those areas where additional support is required both for the child and within the wider family context. Evidence-based interventions are available to address the needs with monitoring to ensure that agreed outcomes are achieved.

D. Wellbeing

The core of GIRFEC is the wellbeing of children and young people in Scotland. The eight areas of wellbeing each child and young person need to progress have been identified and these are provided in Table 1 [42].

Table 1. Eight well-being Indicators and needs (SHANARRI)

Well-being Indicator [42]	Needs
Safe	Protected from abuse, neglect or harm.
Healthy	Experiencing the highest standards of physical and mental health, and supported to make healthy, safe choices.
Achieving	Receiving support and guidance in their learning – boosting their skills, confidence and self-esteem.
Nurtured	Having a nurturing and stimulating place to live and grow.
Active	Having opportunities to take part in a wide range of activities – helping them to build a fulfilling and happy future.
Respected	To be given a voice and involved in the decisions that affect their wellbeing.
Responsible	Taking an active role within their schools and communities.
Included	Getting help and guidance to overcome social, educational, physical and economic inequalities; accepted as full members of the communities in which they live and learn.

These wellbeing indicators are set within the context of the four capacities of progress within the curriculum for excellence. This includes each child and young person being a successful learner, confident individual, responsible citizen and effective contributor.

The GIRFEC national practice model provides the way for all agencies and workers supporting children, young people and their families to develop a common language within a single framework. It is a dynamic and evolving process of assessment, analysis, action and review [43]. This model has enabled practitioners to meet the GIRFEC core values and principles and provided them with a consistent way to identify outcomes and solutions for individual children or young people. It is appropriate, proportionate and timely for assessment and action and has facilitated more effective inter- agency and intra-agency working.

E. Workforce development subgroup

The overall purpose of this group was to prepare and build an appropriate and competent *early years* workforce to effectively implement the universal pathway of care. The workforce needed to have appropriate knowledge, skills, attitudes, qualifications and skill mix to provide and improve the quality of services and care. Key challenges faced included:

– Undertaking this work at a time when NHS resource environment was already challenged by the workforce

needing to improve quality and productivity to realise the ambitions of the health care quality strategy [12].

- The nature and extent of the additional skills required for individuals and teams to effectively respond and deal with to a range of maternal and child vulnerability, complexity and risk factors.
- Achieving the appropriate skill mix of *early years* workforce within available resources.
- Ensuring communication with the *early years* workforce.

Significant changes took place within the early year's workforce with many staff across multiagency and third sector services potentially involved in supporting children/families. It was essential for everyone to know what was happening and know their own areas of responsibility and those of others, how they interact and overlap with other roles, the skills and knowledge they required to do the job as well as recognizing the limits to their competence.

Key areas implemented:

- Awareness raising sessions for the workforce of the BPS program of work (31 October 2012-31 October 14). This included an initial and one year follow up joint professional event; and ongoing briefing sessions to encourage active participation in program work streams.
- Workforce modernisation and planning of the universal early years staff groups.
- Initial learning and developmental needs analysis of the universal *early years* workforce.
- A learning plan to support the program aim and objectives and address identified needs of the *early years* workforce.
- Follow up study (18 -24 months) of the learning and development of the workforce.
- Workforce modernisation and planning of the universal *early years* staff groups.

Emerging issues informed and supported the Interagency *early years* joint workforce development plan. Higher education programs / practice development were informed of contemporary midwifery, health visiting and public health nursing practice changes and policy expectations.

F. E-Health and Data Management subgroup

This group examined the options of systems available to effectively deliver relevant outcomes and develop technology to support efficient evaluation. Robust systems were put in place that had the necessary capacity and capability to electronically share meaningful information. This included demographics, assessments, and care planning within and across agency boundaries. It was anticipated that information recorded in the universal agency systems may become critical in understanding a child or young person's needs.

G. Research and Evaluation subgroup

The group developed an evaluation framework for identified health outcomes. A logic model was useful in providing a graphic plan of the program including short, medium and long term goals. Short term goals set over the first 2-3 years addressed the activities influencing changes, inputs, processes and outputs. Medium term goals over a 5 year period would see outcomes of the differences or changes planned. Longer term goals (10 years) would begin to see improvements in mortality and morbidity of mothers, babies and families. This framework is supported with a database of the recorded information with specific health outcomes as derived from the national policies and guidelines. Additional information is obtained from the national databases [21].

Three areas of activity to achieve the objectives included evaluation, research activity and building research capacity within the *early years* workforce. This included numerous funded projects in practice conducted by practitioners from the *early years* workforce. Evidence emerging informed and continues to inform practice development. The group had a role in supporting dissemination of the research knowledge exchange activities.

H. Current status

The universal pathway was completed for uncomplicated mothers, babies, adolescents and families. This work is ongoing and has now merged into the *early years* work. Further developments are in varying stages of development to support complex and complicated cases where additional support and services are required.

There has been a positive follow up the learning and development of the *early years workforce* who have reported feeling well supported throughout the implementation of the BPS program. This has been positive in relation to their involvement and update in program developments and in the training, development and experience offered to support them in their changing roles and remits.

Initial evaluation of the minimal data set is in progress. This relates to the data collected through databases and national statistics. Research activity is in progress to gain the experiences and perceptions of a range of women and families of the support and information offered at various set points in the universal pathway where front line *early years* workforce have direct input. The focus of this activity includes exploring

person-centred care, and the influences on promoting attachment and bonding and influencing a healthy lifestyle.

Anecdotal information emerging from the development of the program is interesting and implies that this has been beneficial for a range of reasons. These include:

- Involvement of the 'early years workforce in the reshaping and restructuring process
- Developing new skills and expertise
- Re-energising practitioners to look different ways of working
- Improved team working, peer support and networking opportunities
- Improved communication at all levels of the *early years* workforce
- Improved leadership opportunities
- Strengthened partnerships with academia

Developing the program was a challenging endeavor of huge magnitude to be achieved within a short duration. Limitations and delays were experienced due to the competing priorities of clinical commitments, staffing issues and changing priorities. At times, further national guidance and steer in relation to informing specific aspects of program development would have benefitted program development and for reassurance of the workforce. Two particular issues that caused delay and confusion included: how to move forward with the preferred tool for health visitors to conduct the 27-30 month child health review and; the lack of guidance on the hugely resourceful shared electronic documentation tool. These challenges were overcome locally to progress developments.

IV. SUMMARY

Embedding health policy within practice can be daunting and challenging for both health services and the workforce. In Scotland, one health board area adopted a proactive approach when planning the implementation of the suite of *'early years'* policies into practice. This involved working in partnership with the University of the West of Scotland to plan a feasible and innovative program of activity to implement policies in practice. The process adopted an inclusive approach by involving the workforce to help plan and reshape the services to incorporate the *early years* health policies into practice. This activity took the form of the BPS program of activity to develop evidence based universal pathways of care for children, young people and their families. This was an ambitious project involving numerous services and agencies inputting into *early years* work to reduce inequalities and provide a consistent way of working across the services.

This was an ambitious program. Anecdotal evidence emerging suggests that this has been a worthwhile approach for the *early years* workforce. This has been mainly due to the influences on workforce capacity in relation to developing knowledge and skills, influencing leaders and building capacity in research related activity and project management.

The development and implementation of the BPS program provided an ideal leadership opportunity for practitioners. Developments are still ongoing to further develop the *early years* program of activity to incorporate services and assistance for those requiring addition support and services due to complex and complicated situations. The next step planned is to explore capacity building, the experiences gained and professional outcomes from the practitioners' perspective.

Further research is still required in many areas of program impact on practice and including medium and long term health goals. Areas of interest in the short and medium term includes the impact of promoting attachment and bonding on parent child relationships, the usefulness of the 27-30 month child review in the early identification and actions for child development issues and, the effectiveness of working across professions, disciplines and agencies. From a professional perspective, it is of interest to explore the impact of leadership on further developing evidence base practice, improved clinical outcomes, team working and clinical career development. These are important for future developments in a profession working in a dynamic and changing health environment.

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REFERENCES

[1] World Health Organization, "World Health Report 2003: Shaping the future," Geneva, World Health Organization, 2003.

[2] World Health Organization, "Action on the social determinants of health: learning from previous experiences," Social Determinants of Health Discussion Paper 1, Geneva, World Health Organization, 2010.

[3] Department of Health, "Health inequalities: Progress and next steps," London, England, 2008

[4] M. Reid, "Behind the "Glasgow effect," *Bulletin* World Health Organization, 89, pp 706–707, 201, doi:10.2471/blt.11.

[5] Scottish Government, "Equally well: report of the ministerial task force on health inequalities," vol 2, Edinburgh: Scottish Government, 2008.

[6] Scottish Government 2011 Poverty Strategy in Scotland. Edinburgh: Scottish Government.

[7] Scottish Government, "Reducing antenatal health inequalities: outcome focused evidence into action guidance," Edinburgh: Scottish Government, 2011.

[8] Scottish Government, "For Scotland's children: Better integrated services," Edinburgh: Scottish Government, 2001.

[9] Scottish Government, "Achieving our potential," Edinburgh: Scottish Government, 2008.

[10] .Scottish Government, "Getting it right for children and families: A guide to *Getting it right for every child,"* Edinburgh: Scottish Government 2012. www.scotland.gov.uk/gettingitright

[11] S. McIntyre, "Inequalities in health in Scotland: what are they and what can we do about them," Medical research council health and social sciences unit, Occasional Paper 17, Glasgow: MRC, 2007.

[12] Scottish Government, "NHS healthcare quality strategy for NHSScotland," Edinburgh: Scottish Government, 2010.

[13] Scottish Government, "Early years and early intervention: A joint scottish government and COSLA policy statement," Edinburgh: Scottish Government, 2008.

[14] Scottish Government, "Early Years Framework Part 1," Scottish Government, 2008, www.scotland.gov.uk/Publications/2009/01/1309.

[15] Scottish Government 2008f Early Years Framework part 11. Edinburgh: Scottish Government.

[16] Scottish Government, "Getting it right for every child," Edinburgh, Scottish Government, 2008.

[17] Scottish Government, "Practice briefing 4 Using the national practice model II: Gathering information with the my world Triangle," Edinburgh, Scottish Government, 2010.

[18] Scottish Executive, "Protecting Children and Young People: The Charter," Edinburgh: Scottish Executive, 2004.

[19] Scottish Executive, United Nations Convention on the Rights of the Child – Report on the implementation of the UN Convention on the Rights of the Child in Scotland," Edinburgh: Scottish Executive, 2007.

[20] Scottish Executive, A Curriculum for Excellence – the Curriculum Review Group," Edinburgh: Scottish Executive, 2004,

[21] Information Statistics Division, www.isdscotland.org/

[22] B. Stradling, and M. MacNeil, "Getting it right for every child (GIRFEC) Evaluation themed briefing: Briefing 5 outcomes for children and young people," Edinburgh, Scottish Government, 2010.

[23] Scottish Government, "Refreshed framework for maternity services in Scotland," Scottish Government, 2011.

[24] Scottish Government, "Improving maternal and infant nutrition," Scottish Government, 2011.

[25] Scottish Government, "*Guidance on the 27-30 month child health review,"* Scottish Government, 2012.

[26] AS. Garner, JP. Shonkoff, S. Benjamin, and M. Siegel, "Policy Statement: Early childhood adversity, toxic stress, and the role of the pediatrician: translating developmental science into lifelong health," Pediatrics Vol. 129 (1), 2012.

[27] JP. Shonkoff, AS. Garner, S. Benjamin, and M. Siegel, "Technical Report The Lifelong Effects of Early Childhood Adversity and Toxic Stress," published online 2011, doi: 10.1542/peds.2011-2663.

[28] S. Gerhardt, "Why love matters?" East Sussex: Brunner-Routledge, 2004.

[29] BD. Perry, "Maltreated Children: Experience, Brain Development, and the Next Generation," New York: W.W. Norton, 2004.

[30] L. Thomas, A. Fari , and R, Lannon, "A General Theory of Love," New York: Vintage books.

[31] HJ. Nelson, GE. Kendall, and L. Shields, "Neurological and Biological Foundations of Children's Social and Emotional Development: An Integrated Literature Review," The Journal of School Nursing vol. 30 (4), pp 240-250**,** 2014**.** Published online, 2013, doi: 10.1177/1059840513513157.

[32] ML. Gutman, L. Feinstein, L "Parenting behaviours and children's development from infancy to early childhood: changes, continuities, and contributions," Centre for Research on the Wider Benefits of Learning, 2007.

[33] MH. Lifschitz, GS. Wilson, EO, Smith, *et al*, "Factors affecting head growth and intellectual function in children of drug addicts," Pediatrics;75 (42), pp 269–274, *1985.*

[34] S. Parker, S, Greer, and B. Zuckerman, "Double jeopardy: the impact of poverty on early child development," Pediatrics Clinics of North America, 35, pp 1227-1240, 1988.

[35] D. Hawkes, "The UK Millenium cohort study," www.library-media\download\

[36] R. Sabates, and S. Dex, "Multiple risk factors in young children's development. CLS Cohort studies working paper 2012/1," www.cls.ioe.ac.uk/news, 2012.

[37] Scottish Government, "The children and young person (Scotland) act," 2014.

[38] EI. Feijen-de Jong , DEMC. Jansen, F. Baarveld, CP. van der Schans , FG. Schellevis, SA. Reijneveld, "Determinants of late and/or inadequate use of prenatal healthcare in high-income countries: a systematic review," The Journal of European Public health, online DOI: http://dx.doi.org/10.1093/eurpub/ckr164, 2011.

[39] RE, Rowe, and J, Garcia, "Social class, ethnicity and attendance for antenatal care in the United Kingdom: a systematic review," Journal of Public Health Medicine, 25 (2), pp113-9, 2003.

[40] T, Draycott, G. Lewis, and I, Stephens, "Centre for Maternal and Child Enquiries (CMACE)," British Journal of Obstetrics and Gynecology, 118 (Suppl. 1), e12–e21, 2011.

[41] Scottish Government, "A new look at HALL 4: The early years. good health for every child," Edinburgh: Scottish Government, 2011.

[42] Scottish Government, "The scottish child health programme: guidance on the 27-30 month child health review," Edinburgh: Scottish Government, 2012.

[43] www.gov.scot/Topics/People/Young-People/gettingitright/well-being

[44] J. Aldgate, and W. Rose, "A systematic practice model for assessing and managing risk where children need to be protected from harm,"www.scottishgovernment.girfec. 2007.

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