Better Evidence for A Better Start

What Works: An Overview of the Best Available Evidence on Giving Children a Better Start

Version 1.0

1. Introduction

1.1 Overview

The Big Lottery is funding *A Better Start* (ABS) with the aim of improving outcomes for children in early life (0-3 years). The programme focuses on three important areas: nutrition, socio-emotional development and language. It aims to achieve better outcomes in these areas for the most disadvantaged children through changes to whole systems at the level of practice, services, organisations and policies. ABS is beginning in three to five local areas but intends for the learning to be sustained and replicated across the country.

In *The Science Within*[i] we emphasised that the time from conception to a child's fourth birthday is an important window of opportunity, as well as a time of risk. Intervening during this period is, as such, important work that requires strong evidential foundations. Parents need to trust and be confident that what they are participating in will benefit their children and themselves. Practitioners need to know that what they do and how they work makes a difference. Funders need to invest increasingly limited money carefully. This paper summarises what is currently known about 'What Works' to support parents and parenting during pregnancy and the child's first four years.

Although we have identified many evidence-based programmes, there is currently not enough high quality research evaluating the effectiveness of interventions for this time period (i.e. conception to three years) in the UK, and it is therefore still too early to know if many of the science-based promising approaches are effective. There is also a lack of evidence about the impact of universal services, primarily because of difficulties in evaluating whether such population level approaches are effective. As we said in *The Science Within*, much of the evaluation and implementation science is relatively new, and even when we feel confident about particular ways of working, the real world is a messy place with different contexts, cultures and systems to complicate the delivery process. This means that 'what works' is 'what is most likely to work'. We will update this paper as new evidence emerges.

1.2 From 'The Science Within' to 'What Works'

In order to achieve the outcomes for which we are aiming, we need to implement a range of interventions – policies, programmes, practices, processes, quality improvement, and population-level strategies (see Appendix 1 for definitions of these). In *The Science Within* we pulled together evidence from a number of fields, highlighting what we now know about the key influences on a child's early development, how this takes place, and the areas where we can make a difference. The resulting framework enabled us to begin to identify where activities that are aimed at improving nutritional, socio-emotional and language outcomes for children from conception to three years should be focused. In *What Works* we provide an overview of the best available evidence for such activities.

A fundamental ethical principle of ABS activities is that they should benefit children and families and, at a minimum, 'do no harm'. As practitioners and their managers know, prevention activities in early life bring significant responsibilities, and children and parents need to be confident that what they are being offered will benefit their children and themselves. The most effective activities are 'done with' not 'done too' children and parents. This means that families need to be active participants in services. Sharing the evidence and being open about testing and learning is an ethical requirement, and helps to build trust and engagement.

Although much of the most rigorous evidence (i.e. from randomised controlled trials – RCTs) focuses on the effectiveness of programmes, we have also endeavoured where possible to identify relevant policy and practices (see Appendix 1) where there is 'consensus' that such policy or practice is optimal. The interventions to which we refer in this document are mostly what we call *evidence-based*, meaning that they have been tested and found effective using robust comparison group studies (typically RCTs). ABS sites may also seek to implement interventions that are what we are referring to as *science-based*, meaning that while they are rooted in the best-available evidence in terms of their development, they have yet to meet that standard in terms of evaluation, quality and impact. Where this is the case, there will need to be a systematic process of development, testing and evaluation, so that such new developments can be more widely implemented if found to be effective.

1.3 Programme Mechanisms

The interventions or ways of working that we highlight are all effective because they involve the use or delivery of mechanisms that address some aspect of the problem being targeted. These mechanisms are part of a programme's 'logic model' and they capture exactly which aspects of a programme's content can bring about change in terms of the targeted outcome identified in *The Science Within*.

Take infant massage programmes. They are typically utilised with disadvantaged mothers in order to achieve two things: improve postnatal depression and promote the mother's relationship with the baby. Research has identified that for infant massage to be effective in achieving these goals, it must utilise 14 'mechanisms'. For instance, one of the significant factors associated with postnatal depression is isolation. This means that infant massage programmes need to provide opportunities for social engagement if they are to be effective in reducing the mother's depression. Similarly, promotion of the relationship with the infant requires that facilitators have the technical skills and personal qualities to deliver the programme; that they are able to model sensitive interactions with a doll; and that they can teach about infant states and cues. A recent study, however, showed that of eight sites offering infant massage programmes, only two had 10 or more of the 14 key mechanisms available.[ii]

In a similar vein, the Family Nurse Partnership has 18 'core model elements', covering the clients, nurses and supervisors and the organisational infrastructure. When the programme is implemented in accordance with these model elements, organisations, funders and practitioners can have a high level of confidence that results will be comparable to those measured in the research.

Programmes that do not specify and ensure the delivery of the key programme mechanisms are not likely to be successful in bringing about change. Sites therefore need to ensure that staff are aware of the key programme mechanisms, and that they are being delivered.

1.4 Type/Level of Evidence

Where possible we have focused on interventions, or types of intervention, that have been tested and found to be effective. In order to achieve this, we have sought evidence from individual evaluations where children or parents who receive the intervention are compared with similar children or parents not receiving the intervention, or systematic reviews of such evaluations. These studies include RCTs, where the groups are assigned randomly, and quasi-experimental designs (QEDs), where no random assignment occurs. It is important to note that not all of the interventions listed in Table 1 have this level of evidence (we have indicated where this is not the case). It is also important to note that while we have focused on identifying interventions according to the *method* of evaluation, we have not sought to differentiate between studies in terms of their *quality*.

1.5 Levels of Intervention

Within each section in the text that follows, and in Tables 1 and 2, interventions are categorised according to the level of prevention they address. This framework was developed for the Institute of Medicine in the US by a group of scientists and is now widely adopted.[iii] It has six levels: promotion; universal prevention; selective prevention; indicated prevention; treatment; and maintenance. It is important to note that some interventions cross two or more levels. Further, care is needed – combining knowledge of risk with professional judgement – when assessing families' needs and selecting the appropriate level of intervention (see sections 4.2 and 4.3 of this paper). The six levels correspond to the traditional categories of primary, secondary and tertiary prevention as follows:

Primary prevention	**Promotion** activities and interventions are delivered to everyone within a particular population and involve the use of both individual methods of working (i.e. advice from practitioners to individual families) alongside the use of media-based methods that can be delivered both to individual families (e.g. infant nutrition leaflets) and more widely across the population (e.g. advertising 5-a-day using widely displayed posters).

	Universal activities are aimed at preventing the occurrence of problems in the first instance by offering services and interventions routinely to all members of a population. For example, the Healthy Child Programme, maternity and health visiting services are offered on a universal basis, but other universal level interventions can include policy and legal changes. The key features of universal services is that they are seen as being a 'social good' for everyone, and they can be used to promote well-being (i.e. promotion above) and also to prevent problems by identifying families in need of additional services (i.e. selective, indicated, treatment). The latter may require ongoing contact over a period of a child's development.
	Selective methods are delivered to families where there are risk factors that could impact on a child's outcomes. The aim is to prevent the development of problems that may have an impact on the developing foetus or the infant/toddler. As such, selective interventions might target groups of parents where outcomes are known to be poorer due to single or multiple risk factors – for example, parents with low psychological resources (e.g. relating to self-esteem, mastery, locus of control, mental health), teenage parents, families whose first language is not English, pregnant women or women with poor social support, women with unresolved trauma, couples experiencing relationship problems, and any families who may have factors that place them at risk over and above the standard socio-demographic risk, such as workless families or families in 'unsuitable' housing .
Secondary prevention	**Indicated** interventions are those delivered to families where there are early signs of problems that, if not addressed, may pose significant difficulties in terms of both the development of the foetus and infant and the family's capacity to care for their child in early life. This includes, for example, women showing signs of anxiety or depression, couples experiencing relationship problems, women who are obese or who smoke and couples experiencing parenting problems.
Tertiary prevention	**Treatment** interventions are provided to families experiencing diagnosed problems with the aim of reducing the negative impact of the particular problem being targeted. For example, women experiencing severe and ongoing mental health problems, substance-dependency problems and domestic abuse will require treatment for the primary problem (e.g. substance

	dependency, violent partner) alongside further intervention to address the parenting problems that are involved.
	Maintenance interventions are delivered to families who have been identified or diagnosed as having a specific problem that will pose significant difficulties in terms of both the development of the pregnancy and their capacity to parent in the postnatal period, with the aim of enabling them to sustain the changes resulting from treatment programmes. This might include the ongoing services provided to women who are no longer substance dependent, or who are no longer at threat from domestic abuse.

1.6 The Ecological Perspective

An ecological view of pregnancy and early life means understanding the interactions between the many factors and systems that impact on foetal and early childhood development. These include: a child's individual genetic make-up, epigenetic changes and gender; parental age, education, health and relationships; socio-economic circumstances; the community environment; services; and macro cultural, economic and politico-legal systems. By integrating all these factors, a human ecology perspective provides a helpful explanatory framework for understanding inequalities in health and well-being throughout life.

An ecological approach also recognises that no single part of the system can affect change for children in its own. Change depends on services that attend to children's psycho-educational development and social and economic circumstances at multiple levels in a coherent and integrated way. The framework for 'Preparing for Pregnancy, Birth and Beyond' goes some way towards this by describing four levels where expectant parents learn starting with friends and family (including social media), followed by community provision, then routine, universal services and finally, specialist interventions tailored to specific needs.[iv] Applying an ecological perspective to *What Works* therefore involves addressing the way in which each of these systems impacts on the families with whom the sites are working.

1.7 Providing Additional Evidence-Based Services within the Context of the Healthy Child Programme

The Healthy Child Programme[v] (HCP) 0-5 years is the universal preventive service in England, providing families with a programme of health and development reviews, health promotion, parenting support, screening and immunisations. The programme has changed its name over the years but has been a core maternal and infant public health service since before the NHS was established. The HCP was updated in 2009 and is due to be updated again to incorporate new evidence and recent policy changes.

The HCP includes a wide range of promotional activities aimed at supporting children's health and socio-emotional development. However, there is a need to improve the quality of the implementation of the HCP and to strengthen its impact on the three outcome areas that are the focus of ABS. Therefore, while the HCP provides the core service model and intervention within which ABS should be provided, we describe below the specific evidence-based interventions that explicitly address the areas highlighted by *The Science Within.* We think that this will give sites the optimal opportunity to strengthen and build on the HCP to achieve the goals of ABS to improve the nutritional, socio-emotional and language/learning outcomes of disadvantaged children.

Alongside the HCP, the Early Years Foundation Stage (EYFS)[vi] sets standards for the learning, development and care of children from birth to five years, including assessments at two to three and five years of age. It focuses on seven areas, including communication and language, physical development, literacy and personal, social and emotional development.

One of the goals for sites will be to identify innovative ways of offering some of the evidence-based interventions we have highlighted as part of the standard services that are already being provided by a range of practitioners (e.g. midwives, health visitors, early years workers, social workers) across a range of settings (e.g. maternity, HCP, general practice, child care). Funding for ABS provides a unique opportunity for sites to integrate these evidence-based programmes. For example, in Oxfordshire, health visitors developed an innovative model of integrated working across the statutory and voluntary sectors by incorporating the Baby PEEP[vii] programme into their routine provision of baby clinics by health visitors. This involved the development of a new multi-disciplinary/integrated model of delivering baby clinics in which evidence-based PEEP practitioners were introduced into the routine baby clinic to offer additional services aimed at enhancing the development of babies (i.e. by providing opportunities to promote parent-infant interaction). Families and practitioners rated this new model of providing baby clinics very highly in terms of the early development of infants.[viii] In the care pathways below we have described a number of other ways in which evidence-based programmes can be integrated into standard services, with the aim of improving outcomes for families.

1.8 Order of What Follows

The remainder of this paper is divided into three sections.

The first summarises the evidence according to *The Science Within* framework, focusing respectively on maternal physical health in pregnancy, maternal mental health in pregnancy, birth, child nutrition, child socio-emotional development, child language and learning, family economic situation and the wider environment. The text is accompanied by three tables:

- Table 1 describes the interventions we have identified and the evidence that supports them;
- Table 2 depicts the way in which a selection of the interventions might be provided chronologically;
- Table 3 provides website addresses for the named interventions.

A reference list provides sources for the items examined in the literature search, including all of those cited in Table 1.

We then outline a number of possible 'care pathways' to show how the types of intervention highlighted in the *What Works* review of the evidence can fit together chronologically over the period from conception to a child's fourth birthday.

The final section outlines some important issues that sites should address to ensure that evidence-based interventions are implemented effectively.

2. Overview of *What Works*

2.1 Summary

In this section we highlight current evidence about *What Works.* In some areas the evidence is partial and inconclusive, but we have endeavoured to identify some of the key approaches that sites might wish to implement, focusing mainly on those that are supported by evidence from RCTs or QEDs. The material in the next section has been organised using *The Science Within* main headings.

All of the following methods of working should be implemented as part of a wider ecological approach in which familial, social, cultural, relational and economic factors are addressed when planning interventions. There is inevitable repetition as several evidence-based interventions, such as Family Nurse Partnership, impact on multiple outcomes across the chronological stages.

2.2 Maternal Physical Health in Pregnancy

In *The Science Within* we identified that good maternal physical health in pregnancy is fundamental to later infant and child well-being, and we focused in particular on the need for a healthy diet and exercise, smoking cessation, elimination of alcohol and substance use, and good general health.

We have identified a number of promotion and universal interventions that involve the provision of guidance about diet and exercise (in addition to or as part of routine maternity care); evidence-based selective programmes that target families who are at increased risk such as teenage parents (e.g. Family Nurse Partnership – FNP) and that can also be utilised to promote good diet and physical health; and indicated/treatment strategies to address issues such as

smoking (e.g. CBT/Motivational Interviewing, which can be used alongside the standard NHS telephone counselling and STOP smoking clinics) and drinking (e.g. Motivational Interviewing).

2.3 Maternal Mental Health in Pregnancy

In *The Science Within* we showed that good maternal mental health is also important in terms of the development of the foetus, and we highlighted a range of opportunities to promote development. We also noted potential problems, including unplanned pregnancy, unresolved trauma, poor maternal reflective function, domestic abuse and alcohol/drug dependency.

We have identified a number of media-based promotional activities (e.g. distributing materials such as 'The Pregnancy Book'[ix] and 'Birth to Five'[x]) and other sources of universal support that can be provided alongside access to telephone helplines, websites, NHS Direct, children's centres and Sure Start information. We have also recommended the universal delivery of Antenatal Promotional Interviews at 28 weeks, which can be used to identify families in need of additional support.

We have also identified interventions that can be provided as part of a selective programme to teenage pregnant women (e.g. FNP) and indicated/treatment interventions for women with unresolved trauma as a result of experiencing domestic violence (e.g. counselling). We have also highlighted universal and selective interventions to help with preparing for parenthood, such as groups for parents-to-be – including fathers (e.g. Family Foundations).

Indicated/treatment programmes should be provided to women who drink (e.g. brief behavioural counselling, Motivational Interviewing) or who are anxious and/or depressed (e.g. Interpersonal Therapy, CBT). Practitioners working with families who may be experiencing relationship problems should receive special training in dealing with such issues (e.g. Brief Encounters).

We identified a number of evidence-based treatment programmes that target women experiencing a range of problems that will affect the developing foetus and infant/toddler, including domestic abuse (e.g. CBT) and substance dependency (e.g. Parents under Pressure). These programmes should be used alongside other standard services (e.g. substance dependency treatment programmes) to target both the primary problem and the associated parenting problems.

2.4 Birth

In *The Science Within* we identified a number of aspects of the birth that are important in terms of promoting the optimal development of the child, including the opportunities for early breastfeeding and bonding.

A number of universal interventions (e.g. Birth Centre and continuity in midwife-led care) may be provided as part of the adoption of the UNICEF UK Baby-Friendly Breastfeeding Initiative (BFI), including skin-to-skin care and a breast-feed within the first hour of delivery.

2.5 Nutrition

In *The Science Within* we identified that in order to achieve good nutritional and health outcomes infants need to be breastfed and introduced to weaning foods at the appropriate time, and toddlers need to be introduced to healthy eating patterns and activities.

We have identified a range of evidence-based promotional and universal methods of supporting breastfeeding during pregnancy (e.g. informal, practical breastfeeding education in the antenatal period that is delivered in combination with peer support programmes plus a single session of informal, small group and discursive breastfeeding education) and following birth (e.g. UNICEF UK BFI) and beyond (e.g. breastfeeding-specific, practical and problem-solving support from a health professional/practitioner plus peer support programmes).

Examples of universal and selective methods of encouraging appropriate weaning and early activity include professional advice delivered as part of a structured series of home visits or in dietician-led groups (e.g. those tested in the INFANT and NOURISH trials) or at pre-school (e.g. Hip Hop to Health Jr.).

We have also identified a number of evidence-based methods of supporting healthy foods and eating patterns and encouraging activity in toddlerhood that can be delivered as part of a selective/indicated prevention strategy in a range of settings, in particular the home (e.g. Community Mothers, Healthy Beginnings).

2.6 Socio-Emotional Development

In *The Science Within* we identified a number of aspects of the early parenting environment as being important during infancy (e.g. parent-infant interaction, parental sensitivity, parent mind-mindedness, positive/tolerable levels of stress) and toddlerhood (e.g. positive discipline, low stress, and positive parenting practices – including warmth and love, appropriate supervision and boundaries).

A range of promotion and universal evidence-based methods can be implemented to support the above, including media-based techniques (e.g. The Social Baby Book[xi]) and interventions that are delivered either individually (e.g. temperament-based anticipatory guidance, infant massage, Sunderland Infant Programme) or in groups (e.g. PEEP *Learning Together* programme).

We have also identified a range of selective methods of working to support parents who are experiencing problems in the above domains in the immediate postnatal period. The Postnatal Promotional Interview at eight weeks following the birth can be used to promote well-being and identify families in need of

additional services, and also to screen for problems such as postnatal depression. Interventions such as infant massage, the PEEP *Learning Together* programme and other group-based programmes, which will reduce social isolation and depression, have been found to promote the type of parent-infant interaction that will lead to secure attachment and strengthen early development.

In terms of selective provision we have highlighted a number of interventions that could be delivered to women whose infants and toddlers are at increased risk of poor outcomes because, for example, they are teenage parents (e.g. FNP) or have learning disabilities (e.g. selected individually administered home-based behavioural interventions).

The Science Within also identified the need for early identification and treatment of postnatal depression and the need to address early relationship problems. The NICE Guidance on Antenatal and Postnatal Mental Health[xii] recommends screening for postnatal depression (PND) at eight weeks using the EPDS (Edinburgh Postnatal Depression Scale) or Whooley questions.[xiii] However, this screening can also be done using the Postnatal Promotional Interviews (which incorporates the Whooley questions) and the EPDS as appropriate. The evidence, which is summarised in the NICE Guidance, supports the use of a range of interventions for *mild or moderate depression* (e.g. self-administered computerised CBT, self-help materials combined with support for their use from professionals, and group-based support such as mindfulness-based stress reduction programmes) *and moderate to severe anxiety/depression* (e.g. Referral to IAPT[xiv] for brief psychological treatments, and individual support such as CBT or Interpersonal Therapy – IPT). There is also evidence to suggest that where the depression is affecting parent-infant interaction (see section 3.2 below on identification tools) additional interventions should be offered to address this (e.g. Video Interaction Guidance – VIG).

We have also identified a range of evidence-based methods of working to support parents where there is evidence of attachment problems using interventions that target parents on a one-to-one basis (e.g. VIG, Child-Parent Psychotherapy, Watch, Wait and Wonder) or on a group basis (e.g. Circle of Security). A range of manualised individual (e.g. FNP, Minding the Baby) and group-based (e.g. Incredible Years, Triple P) interventions can be used to address other parenting problems, or where there is evidence of child emotional and behavioural problems. It should be noted that a number of group-based parenting programmes are now available, which are promising but still have currently limited evidence of effectiveness. Some of the newly developed programmes that explicitly target parents of infants, appear to offer more programme mechanisms that will achieve the goal of secure infant attachment because they focus more explicitly on parent-infant interaction (e.g. Mellow Babies) rather than on parent and infant behaviours (e.g. Triple P). We have also identified interventions for indicated problems such as partner relationship problems (e.g. Brief Encounters) and concerns about maltreatment (e.g. Parent-Child Interaction Therapy) – see section 3.2 below.

The Science Within also identified the need to prevent maltreatment. This can be done in various ways, including by (a) offering the above methods of support, and (b) providing additional support (e.g. indicated and treatment level prevention) to women experiencing problems (e.g. domestic abuse, alcohol/substance dependency – see section 2.3 and relevant sections of Table 1) or in the case of parent-infant/toddler relationship problems (e.g. SEEK, SafeCare). Such support is likely to be provided as part of high-risk care pathways (see section 3.3.3 below).

2.7 Language and Learning

In *The Science Within* we identified that in order for disadvantaged children to achieve good outcomes in terms of both language and cognitive development, they need good play and verbal exchanges in infancy, and early positive parental input (e.g. warmth, sensitivity, responsiveness, support for autonomy, and early participation in literacy and learning) in addition to limited household chaos and regular routines during toddlerhood.

The Two-Year-Old Education Offer will provide 40% of two-year-olds with 15 hours of early education in good and outstanding settings. Given poverty levels in ABS areas, this is likely to be virtually universal in these areas. A range of curricula can be used to improve language and learning outcomes for children via pre-schools (e.g. High Scope, Curiosity Corner).

In addition we have highlighted a range of selective and indicated evidence-based home- (e.g. PALS, Community Mothers) and centre/nursery-based interventions that can be used during the immediate postnatal period (e.g. Baby PEEP) and beyond (e.g. It Takes Two to Talk) to address *The Science Within* domains highlighted above.

Treatment interventions include specialist interventions for children with delayed speech (e.g. Milieu Teaching Therapy).

2.8 Family Economic Situation

In *The Science Within* we noted that there is a strong association between the economic situation of families and children's nutrition, social and emotional development and language development; children from poorer backgrounds tend to do worse than those who are better-off. The economic and social policies pursued by some countries, notably those in Scandinavia, appear to be the most successful in reducing inequality and poverty through employment, taxes and benefits.

We have highlighted several welfare-to-work programmes from North America that have been shown to improve participants' earnings, income and employment rates, and to reduce poverty and dependence on benefits. In some cases programmes demonstrate gains for children's education and behaviour. These programmes vary, but commonly entail practical support with finding

work and financial support during the transition to work. There are, however, questions about the scalability of such interventions given their cost.

2.9 Wider Environment

In *The Science Within* we identified evidence showing that features of the neighbourhoods where children live can affect children directly, but also *indirectly*, as a result of their impact on their parents' mental health and behaviour. Although some aspects of the wider environment may support children's development, others can be harmful. So, giving children a better start means attending to the families' physical environment and the social networks, facilities and institutions that surround them.

We have identified programmes that provide financial support with housing, which can be effective in reducing overcrowding and homelessness, and also reduce rates of victimisation and social disorder in the neighbourhood. A number of interventions have also been demonstrated to increase neighbourhood safety, including Neighbourhood Watch, street lighting and hot-spot policing. Home safety can also be improved through education, the provision of safety equipment and parenting and home visiting interventions.

There is evidence that changing aspects of the physical or built environment can increase people's level of physical activity, for example through the development of bicycle lanes, traffic-calming measures, and improving access to existing facilities. One study found that providing a safe play space increased children's physical activity.

Many parents of young children work, but this can sometimes make it harder to raise children well, particularly for single parent families. We identified evidence which shows that changing aspects of how the work environment is organised, for instance by altering shift patterns and involving employees in decision-making, can have several benefits, including improved health and reduced stress.

While parents work, children are often in childcare. The need to improve the quality of such childcare is widely acknowledged. Aside from specific early years programmes identified earlier, we found two interventions that seek to improve the competencies of pre-school staff in the areas of social-emotional competencies, language and literacy. Results include improved teaching and interaction with children as well as improved behaviour and language for the children.

3. Fitting Everything Together

3.1 The Concept of a 'Care Pathway'

Care pathways represent one of the main tools used to manage healthcare quality by standardising care processes. Their implementation has been shown to reduce the variability in clinical practice and improve outcomes. They promote organised and efficient patient care based on evidence-based practice.

While most commonly associated with healthcare, care pathways may help ABS sites to specify clearly (a) the identification process, (b) the 'route-map' by which families with particular problems should be 'managed', and (c) the different levels of prevention being implemented within the overall local strategy. The remainder of this section describes how sites might develop such care pathways.

3.2 Methods of Identifying Families with Additional Need

The identification of families with additional needs is complex! It involves understanding the presence and impact of historical and current risks and strengths, and being clear about the ways in which interventions might work to support change. There is also a need to be realistic and to accept that some things can't be changed. Where this is the case, safeguarding may be the primary role of practitioners.

While risks are on the whole associative rather than causal, multiple risk factors have an exponential negative impact. However, prediction is an inexact science, and known risk factors at a population level cannot be applied at an individual level. Furthermore, many children and families do well in spite of the risk factors present. The labelling of families results in low expectations, causes disengagement and may result in wasted resources on interventions that may do no harm, but may not be needed. Identifying strengths is important as these provide the foundations for change from which practitioners and parents will work together.

Sites need to develop good referral pathways and cross-service collaboration, and use methods of working with families that do not make them feel 'interrogated' (see for example the Ante and Postnatal Promotional Guides).[xv]

All of the families being served by ABS will have strengths and be experts in their own lives. They will also be at increased risk of poor outcomes as a result of the socio-economic disadvantage to which they are exposed. Many of them will be experiencing a range of problems that will add to that risk, including anxiety and depression, domestic abuse, substance/alcohol dependency and parenting problems (see *The Science Within* for further details).

Early identification will take place over a period of time as the child develops and the parent builds trust in the practitioner, and as the practitioner is able to assess and analyse the information from an ecological perspective. There is also a need for sites to have:

- Good population data and an information system for assessing and monitoring population level needs and risk in order to support practitioner and service planning;
- Practitioners who can balance knowledge about risk with professional judgement and who recognise that the assessment of risk is a dynamic process over time because a child develops rapidly at this age, families change, parents disclose as trust builds (they need more than one assessment);
- Good assessment processes involving the synthesis of information from multiple sources often in reflection with others;
- The need for adapting oneself and the activity to the family as part of a continual process;
- Methods to promote engagement (because non-engagement means no change).

In section 3.3 below we highlight the key points at which such additional risk should be identified, and using what methods, and in section 4.4 we discuss the engagement of parents.

In order to identify which families need additional support over and above the *Promotion* and *Universal* level strategies highlighted above, it will be necessary to use the following key Universal points of contact to identify families with progressively higher levels of need (e.g. *Selective, Indicated, Treatment; Maintenance*). In Table 2 we have indicated the chronological points at which such identification could take place as part of the universal provision of the Healthy Child Programme and maternity services:

- Booking-in visit at 12 weeks
- Promotional interview 28 weeks
- New baby review 14 days postnatal
- Promotional Interview, eight weeks postnatal, and Comprehensive Health Review
- Review at three months
- One year health review
- Two-and-a-half year review

Midwives working within the ABS sites can be supported to use the booking-in visit to (a) promote well-being and (b) identify families in need of additional services. Promotional interviews at 28 weeks antenatal and eight weeks postnatal can help health visitors to promote well-being and to identify families in need of additional support.[xvi] They can be supplemented by the use of other standardised tools (e.g. EPDS to identify the level of postnatal depression if evidenced by the Whooley questions, which is part of the Promotional Guide; Spousal Assault Risk Assessment (SARA)[xvii] to identify the likelihood of domestic abuse; Parent-Infant Interaction Observation Scale – PIIOS[xviii]). The standard health reviews that are also recommended by the HCP (e.g. New Baby Review,

three months, one year and two-and-a-half year reviews) can also be used to promote well-being and identify additional need.

3.3 Model Care Pathways

The above identification strategy will help with the early identification of women experiencing problems that put them at high risk in terms of poor outcomes for their baby or toddler (e.g. domestic abuse; substance dependency; mental health problems), including abuse (i.e. exposure of babies and toddlers to domestic abuse and substance abuse is a source of emotional abuse). A care pathway will help address these issues, for example by having clear protocols for the referral and management of women from booking-in onwards. Such protocols should involve the following: a clearly defined multidisciplinary group of practitioners with responsibility for the care pathway; infrastructure to support its delivery; and training to ensure that the relevant staff have the skills to (a) identify and engage families and (b) motivate and work therapeutically with them.

This section provides examples of the type of care pathways that will need to be in place to ensure that the above interventions are optimised in terms of achieving their overall aims. We have developed some suggested care pathways, indicating possible trajectories from pregnancy to the postnatal period for three groups defined by level of risk: low risk (i.e. women who have no additional risk over and above demographic factors); medium risk (i.e. women experiencing a number of risks or early signs of problems in addition to demographic risk); and high risk (i.e. women experiencing problems that pose serious risks to the well-being of their baby or toddler). It is important to state that families with complex needs also need universal services.

3.3.1 Low-risk Care Pathways

At booking-in many of the women (possibly around a third) will present with no additional problems other than their social disadvantage. However, even without other more complex problems, poverty and social disadvantage are indicators of poor educational and health outcomes in later childhood. Attention to diet/ nutrition and language development is particularly important for this group. These women should continue through a low-risk care pathway that involves (a) the delivery of promotional and universal level services to support their well-being, and (b) on-going monitoring and assessment for the development of problems. For example, at the 28-week Promotional Interview, the health visitor may identify that a woman who was low-risk at booking-in, now has moderate risk because she is presenting with relationship problems and anxiety/depression. At this point she should be provided with additional evidence-based services that are explicitly aimed at addressing the identified need, alongside on-going monitoring to address the extent to which the need has been met, and to identify other needs that may emerge later. Women who present with no additional needs at 28 weeks and eight weeks postnatal will continue along the low-risk care pathway until later assessment indicates additional need.

3.3.2 Medium-risk Care Pathways

Women who are identified with additional need during either pregnancy or the postnatal period, should be offered additional services and monitored as part of a medium-risk care pathway. For example, women who become moderately or severely depressed during the postnatal period will require treatment services to address this need and to support them in their interaction with their baby. They may also require services to support their relationship with their partner and reduce their social isolation. Ongoing monitoring may then indicate that the woman can move back to a low-risk care pathway, or that she needs to continue on the current pathway, or indeed move to a more high-risk pathway (see below) if, for example, it becomes clear that there are child protection concerns. Care pathways that are designed to address the needs of women with medium-level risk during the postnatal period, should incorporate the use of the Child Assessment Framework (CAF). This will enable sites to (a) provide additional assessment of families whose children are 'in need', (b) deliver some of the evidence-based interventions highlighted in Table 1 as part of multi-strategy and multidisciplinary (i.e. team around the child) models of care, and (c) provide access to high-risk care pathways, such as the one described below, when families need access to children's social care services.

3.3.3. High-risk Pathway

At booking-in, the midwife will identify a group of women (i.e. as many as 20-30% in very disadvantaged areas) where there is a high risk of poor outcomes for the foetus/infant/toddler. This group of women will be experiencing a number of factors that will increase the risk to their baby or toddler significantly (i.e. in terms of toxic stress). So, for example, women who are substance dependent, or experiencing domestic abuse, or who have already had a child removed, or who have a serious mental health problem (e.g. personality disorder) will not only have the presenting problem, but be experiencing a range of other problems. For example, women who experience domestic abuse have often experienced child abuse themselves, meaning that they have both unresolved and current trauma, and they may also be experiencing depression, isolation, a lack of social support and poor housing.

An example of this level of pathway is provided by Oxfordshire Children's Social Care Services, which has developed an innovative multi-disciplinary model of care that involves referral of this group of women by midwives as soon as possible after booking-in, to a specially trained team of social and family support workers. These workers have all been trained to use a range of specialist assessment tools, in addition to an evidence-based model of service delivery, aimed at working therapeutically with parents (e.g. all staff have been trained to deliver the Parents under Pressure programme).

Following referral, the care pathway involves an assessment by the lead social worker, undertaken in partnership with the woman and her partner, followed by

the delivery of Parents under Pressure. This programme is ecologically-based and offers practitioners a range of modules to draw upon to support different aspects of parental functioning, including parenting (e.g. using VIG), mental health (e.g. using mindfulness-based strategies) and wider social problems parents may be facing. It involves the use of Goal Attainment Scaling (i.e. providing explicit goals for each family that are assessed regularly).

The care pathway involves regular assessment periods (e.g. 28 weeks, post-birth, six months) using a range of standardised tools that are aimed at assessing parental mental health, social support, reflective function, parent-infant interaction and willingness to engage. Where necessary, the standard legal processes are employed to ensure the safety of the child (e.g. Care Orders).

The aim of this pathway is to optimise risk management in conjunction with wider statutory services, and where necessary to make an assessment about the need for removal by six months of age at the latest, with early removal being viewed as a 'success', where the family has been unable to achieve the necessary change. Other aspects of this care pathway include the use of concurrent foster care, aimed at avoiding the traumatisation of infants by the system through repeated movements when they have become attached to a foster carer, and post-removal counselling of parents, to address the trauma associated with such loss. Efforts are also made to prevent early pregnancy by encouraging the use of Long-Acting Reversible Contraception.

Women who are no longer at risk following this period are provided with maintenance support to ensure that the progress is sustained over time.

4. Towards Successful Implementation

4.1 Introduction

Past efforts to support the implementation of evidence-based programmes and practices have been characterised as 'letting it happen' – leaving it to policy makers and practitioners to use research findings on their own – or 'helping it happen' – for instance, through website and manuals. 'Making it happen' involves the use of *implementation teams* in which experts use evidence-based implementation strategies to actively support implementation. This has been estimated to produce higher rates of implementation success (80%) than in cases where they are not used (14%).[xix]

In this section, we briefly outline important considerations for ensuring successful implementation. There are several useful guides on this subject that might also be consulted.[xx] The people involved in promoting implementation need several core competencies, including: knowledge and understanding about core programme components and linkages to outcomes; knowledge about implementation science and recommended practice for implementation;

understanding of the local ecology and its impact on programme implementation; and experience of using data for programme improvement and continuous quality improvement.[xxi] It is also essential that there is clear management buy-in to facilitate the necessary time to do things well and 'permission' to stop doing things that are not supported by the evidence, in addition to staff support such as Restorative Supervision.

4.2 Identification

The implementation of a successful strategy for identifying families with additional need involves the following:

1. Assessment points being used as an opportunity for promotion of well-being as well as identification of risk (e.g. the Promotional Interview);
2. The use of a model of partnership working (e.g. the Family Partnership Model[xxii] provides training to facilitate this), and there is much to learn from the FNP;
3. Staff having the skills to use a range of standardised assessment tools alongside their professional skills and knowledge base, to facilitate the assessment process:
    - ✓ Parental mental health (e.g. EPDS; Generalised Anxiety Disorder Assessment – GAD-7[xxiii])
    - ✓ Parent-infant interaction (e.g. PIIOS – independent observation; Ages and Stages Questionnaire (ASQ)[xxiv] – parent report)
    - ✓ Social Support (e.g. Social Support Scale[xxv])
    - ✓ Child development, including growth and measurement (e.g. ASQ, Peds-QL,[xxvi] UK-WHO growth charts[xxvii]).
4. Infrastructure arrangements to enable the reviews to take place:
    - ✓ Management communication about the importance of these checks;
    - ✓ Permission and time to conduct them, and the necessary multi-agency working to enable them to be successful (e.g. to inform the 28-week antenatal review health visitors, who need information on pregnant women from midwives);
    - ✓ What other tools are available that can be used as part of such assessments (e.g. ASQ).
5. Clarity about what is being assessed and how:
    - ✓ Links need to be made between the overall goals of the ABS programme (i.e. improving infant nutrition, language and socio-emotional development) and how the reviews are being used to identify risks to these outcomes.
6. Staff development to undertake the above:
    - ✓ Training will be required to ensure that all health visitors have the skills to undertake promotional interviews (see the Centre for Parent and Child Support – www.cpcs.org.uk).

4.3 Matching Needs and Services

The contextual factors that families bring will range from the highly individual, including their own early life experiences, attachment patterns, mental health problems, social support and willingness to engage, through to wider economic factors affecting them, such as income, housing and the neighbourhood environment. Each parent and child will therefore bring a unique configuration of factors and, as described above, one of the key activities of each site will be to undertake a programme of screening and identification in order to assess what these are and the extent to which they provide resilience or increase risk. This will ensure that families can be matched in terms of their level of needs and the programmes that are available.

A number of factors need to be carefully addressed in terms of matching individual women, children and families with services. It is important to bear in mind that not all families will benefit from a service that is on offer. For example, infant massage programmes are beneficial for disadvantaged mothers and those who are experiencing postnatal depression; they are not, however, sufficiently intensive on their own to support women experiencing more diverse problems. Further, families change, and maintaining engagement requires the skilful matching of agendas between practitioner and parent on a contact-by-contact – and sometimes minute-by-minute – basis.

4.4 Reaching the 'Hard to Reach'

Although a family's level of need may be well matched with a particular service, additional key mechanisms will need to be present to promote uptake, continued attendance and overall change in families, whose willingness to engage and readiness to change are lower than normal. Difficulties in engaging families, including both recruitment and retention, are one of the main reasons for interventions failing. Data suggest that around only one-third of parents who are invited actually enrol in the programme and that around 50% of these may then drop out. Parents facing severe problems are least likely to engage with programmes. However, too often the problem of so-called 'hard-to-reach' families is more a problem of 'hard-to-access' services. There is now substantial research on the nature of the problem and ways to address it,[xxviii]and much to learn from FNP, where over 80% of eligible families enrol on the programme and over 60% are still engaged at the end of the programme.

First, there is a need for a clear recruitment process, with understanding and commitment from those at the beginning of this process. Next, active and creative outreach work is often necessary to recruit families. Investment in building relationships with parents is critical, ideally by skilful practitioners who can build trust and adapt their approach to match family and programme priorities. Such practitioners are also ideally resilient, quick to see client strengths and slow to interpret rejection personally. They are also able to judge readiness to change and connect with client motivations. Ongoing practical and emotional support is needed to enable families to stay involved. This includes the provision of transport, childcare and food, as well as reminders by phone or text

about the next session. Incentives for providers to boost recruitment and retention can help to promote continuation.

A family's readiness to change will be a key factor in engagement, and below we have identified some of the interventions that can help with this, alongside a range of methods of working that will facilitate the type of practitioner-client relationship that will enable such lack of readiness to be addressed (e.g. Partnership working; Motivational Interviewing).

4.5 Working with Families

One of the key factors in facilitating change is the relationship that programme staff are able to establish with the participating families. Such relationships need to be based on a partnership model of working – that is, they need to be supportive, guiding, motivating, strengths-based and consistent. One of the key factors that will promote the success of the programmes being offered across the sites is *continuity* – the extent to which pregnant women and new mothers/parents are provided with the opportunity to establish a small number of key relationships across the period. Ideally, women would be allocated one midwife who stays with them from booking to delivery; one health visitor (or in FNP a family nurse) who oversees the HCP for that child and establishes contact at 28 weeks antenatal and continues through three years; programme facilitators who deliver entire programmes; and, where necessary, just one social worker and one family support worker.

Where there are a number of services available, families should be involved in the decision-making process about which ones they use. For example, some adults (i.e. with an avoidant attachment style) may be more able to benefit from a programme such as VIG, which is focused on the 'here and now', than from a programme such as parent-infant psychotherapy, which may involve them thinking about the past.

4.6 Family Readiness to Change

A number of interventions have been developed to promote parent engagement with programmes by providing practitioners with core sets of skills to enable partnership and collaborative working. For example, the Getting Ready[xxix] programme is used as an adjunct training and service to augment existing curricula and services and is aimed at promoting family and child school-readiness by explicitly focusing on the relationships between practitioner, parent and child. It involves a range of collaborative and partnership-based strategies to help the practitioner to develop the parent-professional relationship in ways that will promote the parent-child relationship. The Family Partnership Model[xxx] is a similar approach based on an 'explicit model of the helping process that demonstrates how specific helper qualities and skills, when used in partnership, enable parents and families to overcome their difficulties, build strengths and resilience and fulfil their goals more effectively'.[xxxi] In addition, the FNP programme gives family nurses the skills, knowledge,

materials and support to be able to build deep, trusting relationships that help clients to change how they care for themselves and their child.

4.7 Practitioner Motivation and Readiness to Change

A range of factors can affect a practitioner's readiness to take on board the new practices involved with the delivery of new ways of working and new services, including cultural beliefs/attitudes, social systems and relationships, current and persistent stressors, and personal characteristics including motivation, qualities and skills.

Several practices can help ensure that new programmes and services are delivered optimally: selecting staff with the right attitudes and qualities (this is a significant predictor of programme success); once staff are in post assessing their readiness to change using standardised tools designed for this purpose; delivering 'preparation for change' training to increase readiness, motivation and confidence; and providing coaching and supervision for those who are ready to change.

It is also important to understand and respond to practitioners' motivations.[xxxii] Practitioners are concerned to address social injustice and improve child outcomes, which they see as being achieved by building relationships with children and families. They derive a sense of accomplishment from seeing their actions contribute to improved child outcomes. They enjoy having professional autonomy and discretion, and many are motivated by professional and learning opportunities, intellectual challenge and the opportunity to master new skills. Lastly, practitioners are motivated by having adequate support and resources, including supportive supervision, opportunity for reflective practice and being part of a team.

These points need to be taken into account when designing and introducing evidence-based programmes.[xxxiii] For example, the programme guidance should clarify the processes required for cultural adaptation and the degree of flexibility and autonomy that is permissible. Fidelity to the design is important (see section 4.8 below), so any adaptation should preserve core intervention components, ensuring that the programme mechanisms are left intact, and be done in close collaboration with the programme developer. Such programmes should be introduced as an opportunity for staff wanting to develop their skills, with information about how implementers can become accredited. It should be emphasised that implementing parenting programmes creates an opportunity to spend quality time with children and families. The programme should be adequately supported in terms of learning materials, technical assistance, internal quality assurance capability, and supervision. Lastly, continuous 'live' feedback to practitioners using data dashboards can help practitioners to track the differences their intervention is making.

4.8 Fidelity

Programme fidelity involves ensuring that evidence-based programmes are replicated as closely as possible to the design in order to avoid dilution and unintentional 'programme drift'. It has four main components: adherence (i.e. was a component delivered?), quality (i.e. how well was it delivered?), dose (i.e. was the right amount delivered?) and engagement (i.e. did recipients engage with the programme?).

The 'zone of tolerable adaptation' refers to the extent to which a programme can be adapted to meet local needs before the associated treatment effects are diminished. Some local adaptation or co-construction to ensure that a programme is delivered in a culturally sensitive way can result in the most effective delivery. However, adaptation that involves core programme components being delivered sub-optimally, or not at all, is likely to diminish the impact. Any adaptation should be undertaken in consultation with the programme developer.

Various strategies are recommended to help strengthen implementation fidelity, including training and coaching.[xxxiv] Monitoring fidelity also increases the likelihood of faithful implementation and therefore that the delivery of evidence-based programmes will achieve the desired change. Measures should capture the different elements of fidelity referred to above and data can be collected in various ways, including self-rating checklists and direct observation by, for instance, trainers, coaches or supervisors. Training should be given to all staff involved in the rating/assessment of fidelity in order to promote reliability across raters. A feedback system is required to ensure that fidelity data is used.

4.9 Workforce Development

Recruitment, training and supervision are all core to the effective delivery of evidence-based programmes. Starting with the first of these, good staff recruitment ensures that people who are appointed to deliver services and programmes not only have the necessary technical skills and expertise, but also the type of personal qualities that are associated with effective working (e.g. humility, honesty, being non-judgmental).[xxxv] Such staff also show a willingness to engage in ongoing training and development as part of the delivery of new methods of working.

Further training will be required for many of the evidence-based ways of working that have been identified in Tables 1 and 2. A skilling-up of the workforce on an ongoing basis should therefore be a major part of the investment plans for each site. Sites should ensure a good skill-mix across their teams of staff. For example, while not everyone needs the skills to deliver VIG, sites should ensure that key members within each health visiting and social work team have such skills of working. Most of the methods of working that have been highlighted here have affordable UK-based training programmes available, many of which provide on-going support to practitioners. Sites should identify the core training skills for each group of practitioners and the optional or additional skills.

For example, all health visitors should have partnership working and Promotional Interviewing skills (see CPCS.org.uk). Additional training might include infant massage and/or VIG. Sites should also ensure that sufficient numbers of key staff have training such as Level 5 Diplomas in Leadership for Children's Care and Development (both Advanced Practice; and Management).

Supervision is also key to the effective delivery of programmes. 'Restorative supervision' has been identified as being an effective method of supporting health visitors, family nurses and other staff working with vulnerable families.[xxxvi]

5. Where Next?

In this paper and the accompanying documents we identify numerous evidence-based interventions, or types of intervention, that ABS can choose to implement as part of their strategies or use to inform science-based innovation. ABS sites should ensure that they provide a balance of universal and targeted/specialist interventions, and remember that nothing works if there is no engagement. While some of the programmes identified will work for specific ABS outcomes, others will contribute to multiple outcomes across all three domains: nutrition, language and socio-emotional development. Interventions will also only work if practitioners are chosen carefully, are committed to their work, feel valued, and have the skills and knowledge to build respectful and trusting relationships.

The implementation of evidence-based interventions will only be successful if sites prepare well at the practitioner, community and system levels. Commitment by the organisation, in addition to the culture and behaviours of managers at every level, will impact on practitioner turnover and parent engagement, and ultimately on outcomes. The 'implementation science' will be core to helping sites deliver evidence-based interventions well.

When selecting what interventions and services to offer families it is suggested that sites:

- Use the Healthy Child Programme and the two-year childcare offer as core universal services to build on, and start with those interventions with the strongest evidence
- Ensure that the services selected meet the specific needs profile of the population
- Ensure that an appropriate 'mix' of the different levels of preventive services is provided to meet the developmental needs of children
- Plan care pathways for families with different risk profiles (e.g. low, medium and high)
- Ensure programmes have specified 'programme mechanisms' to structure implementation, and that systems for continuous monitoring and improvement are used

- Address the underlying factors that influence outcomes (e.g. effective early identification, engagement, the match between population need and service provision)
- Use an ecological approach to build a comprehensive and multi-faceted ABS programme.

Appendix 1: Definitions of Types of Intervention

Policies refer to a course of action (or inaction) decided by policy makers to shape how people behave – for example, banning smoking in public places, or withdrawing welfare to encourage people to find work – as well as the provision of resources – for example, to provide housing.

Practices refer to the activities of practitioners and may be broken down into discrete elements or methods aimed at caring for people during times of change and difficulty and helping people to make changes – for example, forming trusting relationships with expectant and new parents, running groups where people can learn from each other, using communication skills that motivate and guide, modeling high-quality infant-caregiver interactions, and using smoking cessation methods.

Programmes are discrete, structured packages of practices, often captured in manuals, providing tools to guide what should be delivered to whom, when, why, how, and in what order. A programme is usually accompanied by a system of support (for example, technical assistance) to ensure consistent high-quality replication.

Processes refers to the operating systems that services use to support practices and programmes. These processes may define how families are to be offered services, how their needs are assessed, the competence and training of the workforce, funding, what information is collected and the governance processes that ensure safety and quality for children, families and practitioners.

Quality improvement refers to systematic methods to improve the quality of provision to ensure that it is safe, effective, timely, efficient and equitable. Methods include gathering and engaging practitioners in analysing data, client feedback, reflective supervision, coaching, learning events and adapting activities and processes, such as making care pathways clearer.

Population-level interventions are those activities that are aimed at changing factors that individuals alone cannot change (e.g. pollution, road safety, community resources, housing provision) as well as activities that effect change in the whole population (rather than targeted or specialist activities) with a view to changing the overall culture and thereby improving the functioning of the whole community as well as the more disadvantaged members of a population.

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