Measuring what matters: Technical report

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This is the technical report to accompany the guidance written specifically for children's centres and partner agencies. It provides further detail on the methodology, outcomes and selected measures, and includes recommendations for Government, commissioners, practitioners and further research.

The children's centre guide is available at: www.instituteofhealthequity.org and www.4children.org.uk

Background

The early years are critically important for creating 'solid psychological and neurological foundations to optimise lifelong social, emotional and physical health, and educational and economic achievement'[1]. A number of government reviews[2] have reinforced the importance of early intervention and supporting families in the foundation years, and have set out a strong economic case for investing in the early years to improve outcomes for children in later life.

Giving every child the best start in life is the highest priority recommendation of *Fair Society, Healthy Lives*[3], the review of health inequalities led by Professor Sir Michael Marmot. Once children are safe and their basic health needs are met, ensuring that all children and families achieve the best possible outcomes should remain a key priority of national and local government.

Children's centres play a key role in early intervention and are a vital source of support for young children and their families, particularly the most disadvantaged. They offer a range of activities, family services and advice, to promote school readiness[4], improve family outcomes and reduce inequalities in child health and development, and are highly valued by communities. However, children's centres require considerable investment and their overall effectiveness – in terms of improving outcomes for children and providing value for money – is regularly debated[5].

The Sure Start Programme begun in 1998 as Sure Start Local Programmes, before many developed into children's centres as we now know them. Centres were originally set up to serve small areas, with no clear administrative boundaries and no systems in place to ease the collection of information to evidence impact.

Another challenge that children's centres face is that their impact can take many years to manifest, and staking claim to that impact can be problematic. The Evaluation of Children's Centres in England (ECCE) study[6] aims to publish its main report on the impact of children's centres on families' outcomes in 2015.

During field visits for this research, it emerged that children's centres attempt to overcome these measurement hurdles by demonstrating their success in terms of:

I. Outputs, such as the number of families reached and engaged by services
II. Case files that track and demonstrate the improvements made by individual families
III. 'Soft outcome' data, such as whether a parent feels like they and/or their children have benefitted from a service.

This is important information that can help children's centres to show the 'distance travelled' by families and the 'stepping stones' towards achieving impact. However, inspectors, investors, commissioners and managers, as well as the Government, need to see clear, comparable data that demonstrates the ways in which children's centres 'improve outcomes for young children and their families and reduce inequalities between families in greatest need and their peers'[7]: the core purpose of children's centres.

Failing to evidence the positive difference children's centres make to families' outcomes will make it difficult for centres to improve their offer, and leaves them vulnerable to criticism, cuts and closures.

It was in this context that UCL's Institute of Health Equity was asked by 4Children to develop an outcomes framework for children's centres, based on the best child health and development research available, to help inform their activities and priorities.

This work is published in *An Equal Start: Improving outcomes in Children's Centres*[8], available at:
www.instituteofhealthequity.org/projects/an-equal-start-improving-outcomes-in-childrens-centres

The aim of this phase II report is to articulate the ways in which children's centres and linked services can embed and measure their contribution towards achieving the outcomes framework most effectively.

In the Chapter 2 we briefly recap the rationale behind the development of the outcomes framework detailed in *An Equal Start.* This chapter is especially for those not familiar

with the report or for those who wish to refresh their understanding of the latest significant research on child health and development.

In Chapter 3, we consider the key early years policy developments and what the current policy context has meant for children's centre provision. Existing measurement processes are also discussed in this chapter and Chapter 4.

Further to the methodology in Chapter 5, we present detailed information on the measures to support the outcomes framework. This information is presented as a set of tables (Chapter 6). Chapter 7 considers practical issues: *who* should use this outcomes evaluation framework and *how* it should be used. Finally, in Chapter 8, we consider how best to embed the measures, including next steps for this research.

Figure 1 Areas for focus and outcomes	
Areas for focus	**Essential outcomes identified in *An Equal Start***
Effective outreach	A. Effective outreach and sustained engagement with the wider community, with a particular focus on the most disadvantaged families
Children are developing well	1. All children are developing age appropriate skills in drawing and copying
	2. Children increase the level to which they pay attention during activities and to the people around them
	3. Children are developing age appropriate comprehension of spoken and written language.
	4. Children are building age appropriate use of spoken and written language
	5. Children are engaging in age appropriate play
	6. Children have age appropriate self-management and self control
	7. Fewer children born with low birth weight
	8. Fewer children with high or low Body Mass Index
Parenting and parent context enables good parenting and child development	9. Fewer women exposed to tobacco smoke during pregnancy
	10. More mothers who breastfeed
	11. More parents regularly talking to their child using a wide range of words and sentence structures, including songs, poems and rhymes
	12. More parents are reading to their child every day
	13. More parents are regularly engaging positively with their children
	14. Improved parental responsiveness and secure parent-child attachment
	15. More parents are setting and reinforcing boundaries
	16. More parents are experiencing lower levels of stress in their home and in their lives
	17. More parents with good mental wellbeing
	18. More parents have greater levels of support from friends and/or family
	19. More parents are improving their basic skills, particularly in literacy and numeracy
	20. More parents are increasing their knowledge and application of good parenting
	21. More parents are accessing good work or developing the skills needed for employment, particularly those furthest away from the labour market.

** Outcome 14 was formerly worded: 'More parents are actively listening to their children'. However, this has been adapted to 'Increased parental responsiveness and secure parent-child attachment'. The quality of attachment is strongly linked to children's health and development, increased resilience and protection against poor outcomes. Increased responsiveness has also been shown*

to facilitate growth in children's social and emotional development, communication and cognitive competence. For further information please see: An Equal Start.

Brief overview of the Institute of Health Equity's 'essential outcomes'

Once children are safe and their basic health needs are met, children's centres should focus on achieving and measuring the 'essential outcomes', published in *An Equal Start*. These 'essential outcomes' are what the evidence suggests are the strongest drivers, or predictors, of good outcomes for children, now and in the future. Eight of the essential outcomes are specific to children, and include four domains of health and development:

I. Cognitive development
II. How well children are learning to communicate and use language
III. The emergence of social and emotional skills
IV. Children's physical health.

However, the parenting that surrounds the child and the context in which that parenting takes place have been found to be the best predictors of outcomes for children. Therefore, to truly improve outcomes for children, we also need to be looking at the 'building blocks' of children's health and development. Thirteen of the essential outcomes are thus specific to parents and their circumstances.

The outcomes framework containing the 21 essential outcomes is detailed on the previous page in Figure 1.

Figure 2 illustrates the essential outcomes in a pathways model. This provides another way of showing how the key drivers influence children's health and development outcomes. So, in essence, we are turning the framework upside down: having access to good economic and social resources predicts protective positive maternal behaviours and the likelihood that a child will experience a stimulating home-learning environment. If the building blocks are right, then children's outcomes – including improved school readiness (measured through more children achieving a 'good level of development' on the Early Years Foundation Stage Profile [EYFSP]) – and a reduction in inequalities, are more likely to be achieved.

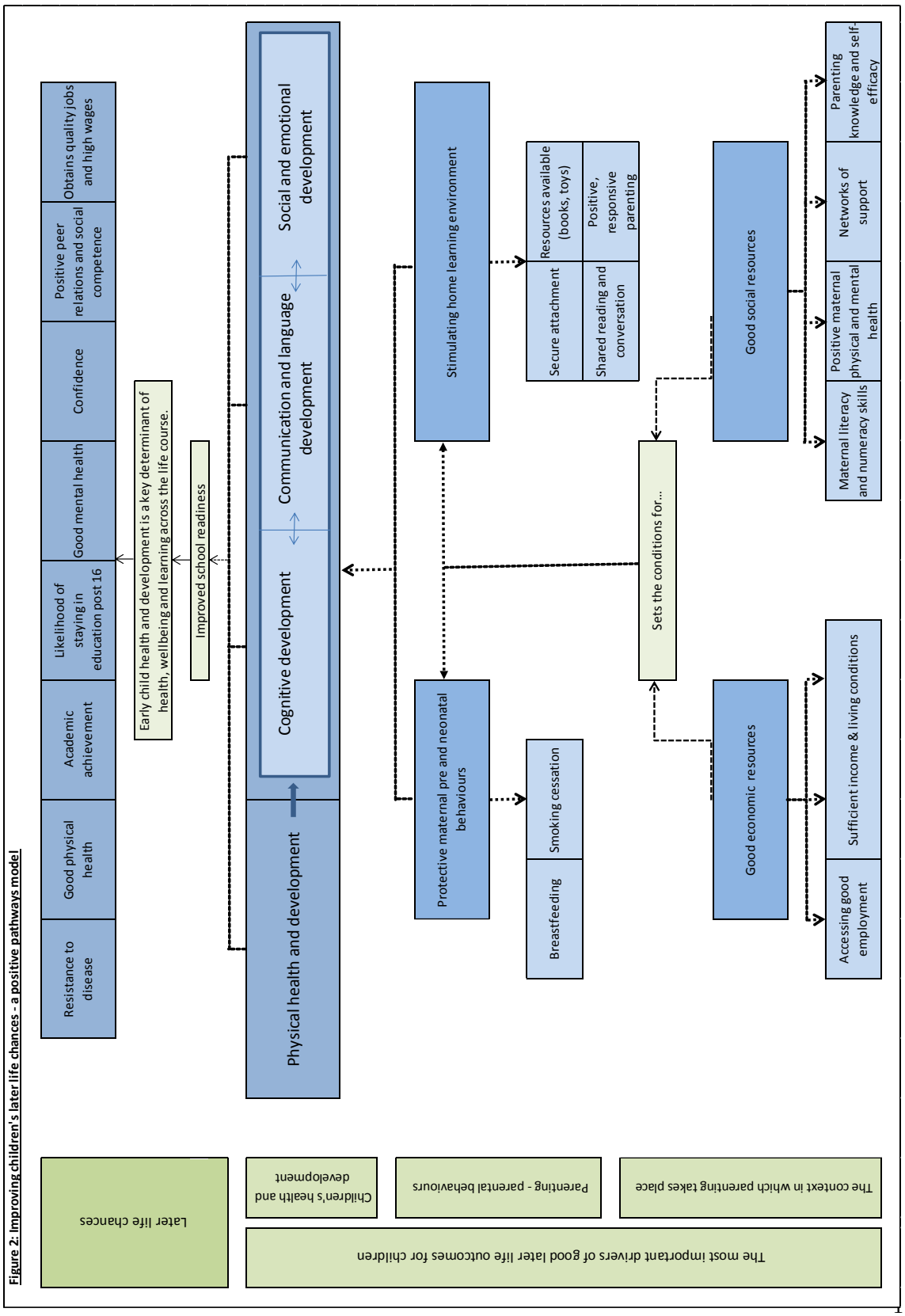

Figure 2: Improving children's later life chances - a positive pathways model

Referring to Figure 2, next we briefly describe the various elements of the framework, starting with engagement and improving context, and working towards children developing well.

Outreach and sustained engagement

Engaging and retaining those families who are likely to benefit the most from children's centres and linked agencies is as important as the quality of services and support available. Unless children's centres know where families with under-fives, and those with the highest levels of need, are living, they will be unable to engage these families and will thus have minimal impact in reducing the inequalities gap.

The importance of ensuring access and engagement with families for improved outcomes was discussed in *An Equal Start*. However, an outcome for this was not originally set in the summary document. We have addressed this in this evaluation framework to ensure that this aspect is not lost.

Being financially self-supporting

An Equal Start drew attention to the fact that worklessness is associated with poor outcomes for children, including poor educational achievement. Financial difficulty and worklessness are also linked to higher levels of stress and poor maternal mental health, including depression[9] and increased social isolation[10]. In turn, these can lead to maternal displays of irrational and volatile behaviour or a failure to focus on the child's development and needs, both of which can impair the parent–child relationship. Consequently, the development of secure attachment between mother and child is disrupted, as well as the mother's ability to provide positive, responsive parenting and learning opportunities, all of which are fundamental characteristics of the home learning environment[11].

The proportion of children who experience persistent poverty in the early years who then reach a good level of development is less than half of those who do not experience any poverty. Furthermore, the Effective Provision of Pre-School Education Project (EPPE)[12] demonstrated an association between parental income and children's cognitive ability[13]. Children from higher socioeconomic backgrounds were found to have a larger vocabulary than children from lower socioeconomic groups[14]. A link was also found

between socioeconomic background and social and emotional development, with growing evidence that as the level of disadvantage increases, so does the number of behavioural problems among children; children in these groups also have higher rates of mental ill-health and diagnosed mental illness than their peers[15].

Poverty experienced in the early years has been found to have a greater impact on children's outcomes than if experienced at any other time[16].

Accessing employment is considered to be the most sustainable way of lifting a family out of poverty, given the gap between what is provided by out-of-work income supplements and the poverty line[17]. However, work will not necessarily lift a family out of poverty: two-thirds of children growing up in poverty live in a family where at least one member works[18], and work needs to be classified as 'good work' to improve outcomes for children. For example, certain work can be detrimental for an individual's health and can mean children receive less time and attention from that family member. *Fair Society, Healthy Lives*[19] argues that:

'Jobs need to be sustainable and offer a minimum level of quality, to include not only a decent living wage, but also opportunities for in-work development, the flexibility to enable people to balance work and family life, and protection from adverse conditions that can damage health … the quality of work matters. Getting people off benefits and into low paid, insecure and health-damaging work is not a desirable option'[20].

Consideration needs to be given to the reasons, apart from lack of suitable work, which parents give for not working. For example, parents may have health issues that they need support with, or they may be unable to afford or to access childcare.

Improving knowledge and skills

Maternal education acts as a protective, predictive determinant of child health and development. Having only low-level skills and being out of work makes it difficult to access any employment. However, a range of evidence exists to show that adult learning cannot only provide useful skills as a stepping stone to gaining employment, but can also contribute to a host of other key outcomes, including improved mental health, self-efficacy, confidence and networks of support[21].

Mothers educated to A-level, under- or post-graduate degree level have, on average, better numeracy and literacy skills than those with lower levels of education[22], and demonstrate better parenting in terms of the quality of the mother–infant interaction and the use of educational communication[23]. Results remain significant even when family income and marital status are taken into account[24]. Differences in levels of maternal education have also been found to explain significant variance in children's achievement[25]: the children of mothers with better basic skills[26] perform better in cognitive tests from early childhood[27].

However, evidence suggests that for more educated parents, basic skills in literacy and numeracy do not appear to be an important determinant of child cognitive outcomes. On the other hand, for parents with lower qualification levels (up to GCSEs/NVQ 2), having good basic skills in literacy and numeracy[28] is strongly associated with improved child outcomes[29], an increase in earnings, increased confidence in applying for jobs[30] and increased motivation to look for work[31].

Good mental health and well-being

An Equal Start described how good parental well-being is correlated with improved mental health, lower levels of stress and higher levels of support from friends and family for those parents[32].

Research has found that antenatal maternal stress, anxiety or depression – often in combination with associated higher rates of smoking, misuse of alcohol, and drug use while pregnant – can impact on foetal development through the direct action of chemicals on the brain of the foetus. New-born babies have also been found to respond to stress by producing high levels of the stress hormone cortisol, which can be harmful to brain development[33].

Maternal stress, anxiety and antenatal depression can affect children's development by disrupting the child's environment and the parent's capacity to focus on their child's needs. Children born to mothers who experienced antenatal stress, anxiety or depression perform at a lower cognitive level, have lower levels of attachment, poorer physical health, and display more emotional difficulties and conduct disorders than children born to mothers with good mental well-being[34]. Maternal depression can also

contribute to low birth-weight and the ability of mothers to successfully breastfeed and attempt to breastfeed[35].

About 10–20 per cent of pregnant women suffer from antenatal depression and anxiety. However, stress, anxiety and depression during pregnancy are frequently undetected and so fail to be treated[36]. Studies by Hung (2004) and Corwin *et al* (2005) showed that perceived stress during the first seven to 42 days postpartum negatively correlated to the mental health of mothers[37]. Identifying and improving maternal stress at the earliest possible opportunity is therefore crucial not only for the welfare of the mother but also for child development.

Throughout the course of this research, we heard evidence of families across the entire social gradient experiencing negative mental health. However, overall, research has found a higher incidence of mental health problems within the poorest families[38].

Good mental health and well-being – greater levels of support from family and friends

The importance of social networks for helping people manage the complexities that they face on a daily basis was discussed in *An Equal Start*. Strong social networks act as protection against other risk factors for poor outcomes and provide a buffer to the daily challenges of parenting[39]. Mothers with extensive social networks have been found to have more positive interactions with their children – characterised by praising their children more and demonstrating less controlling behaviour – than mothers who have smaller networks or who are unhappy with the extent or quality of their social networks. Positive parent–child interaction is associated with improved outcomes for children.

Research has also found that the size of mothers' social networks is positively correlated with measures of their mental health. Indeed, the three specific outcomes discussed in *An Equal Start* under the umbrella of maternal mental well-being (stress, mental health and networks of support) often co-exist. For example, mothers who experience a significant stress in their lives and have low levels of support are more likely to become depressed after another stressful episode[40].

The quality of the closest relationships also influences children's outcomes. For example, the parental relationship quality is a crucial aspect of parental support and plays a role in aspects of child development including a child's academic achievement

and school readiness[41]. Poor parent relationships are a creator of stress, which can affect maternal health and the social and emotional development of children, including the ability of children to form their own strong relationships with peers.

Support from social networks can include emotional support, instrumental support (such as providing food, helping with home repairs or car-sharing), informational support (such as offering parenting advice), and/or appraisal support (such as providing encouragement or a listening ear). However, a key aspect of engagement with social networks is willingness to ask for help[42].

Mothers across the social gradient can experience low levels of support. For example, during fieldwork we spoke to parents at children's centres based in more affluent local authorities that served populations with above-average rates of post-natal depression (PND). PND was particularly prevalent among working mothers who struggled to admit that they were having difficulties successfully balancing a home and work life while living some distance away from friends and family. However, overall, low levels of social support are more frequently associated with poorer socioeconomic groups[43].

Children's centres can be a useful foundation for more insular families. For example, one of the parents we spoke to during the research described how staff at the centre acted as initial sources of support and helped build her confidence to make links with other families with young children in the community:

"I have made so many friends from coming to the children centre, other mums and staff – the children's centre has meant everything to me and helped me through so much."

Parental behaviours – Exposure to tobacco smoke

Smoking during pregnancy – and exposure to tobacco smoke – is a major, although modifiable, risk factor for a host of negative life-course outcomes. *An Equal Start* detailed how exposure to tobacco smoke during pregnancy is responsible for a significant proportion of foetal morbidity and infant mortality[44], and is associated with low birth-weight and increased risk of obesity in the early years[45].

The latest Infant Feeding Survey (2010)[46] found that just over a quarter of mothers (26 per cent) in England smoked at some point in the 12 months immediately before or

during their pregnancy, down from a third (33 per cent) in 2005. Although babies from across the social gradient can and are exposed to harmful carbon monoxide (CO), overall, babies from low socioeconomic backgrounds are more likely to be born to mothers who smoke, and to have greater exposure to second-hand smoke during their childhood[47].

Maternal behaviour – Breastfeeding

There is significant evidence that breastfeeding – and breastfeeding for at least six months – provides children with a healthy start in life[48]. Current international and NHS policy recommends exclusive breastfeeding for around the first six months[49]. Breastfeeding provides new-borns with all the necessary nutrients and is associated with healthier physical, cognitive and social development with lifelong benefits, including improved social mobility[50]. Breastfeeding also boosts parent–child attachment, providing children with feelings of security, which are associated with positive child health and development, and lifelong health, well-being and learning. *An Equal Start* examined how children who are breastfed are less likely to experience many of the infections and allergies of infancy and have lower risks of obesity in childhood[51]. Despite these advantages, breastfeeding rates in the UK are among the lowest in Europe[52].

As with the other essential outcomes, there is a social gradient in breastfeeding rates and breastfeeding duration: a recent study found that only 51 per cent of mothers from low socioeconomic backgrounds attempted to breastfeed, compared with 90 per cent of more affluent mothers[53]. Duration of breastfeeding also followed a social gradient with poorer mothers spending less time breastfeeding[54]. Research suggests that breastfeeding is especially important for single and lower-income mothers[55].

As there is evidence that new mothers are less likely to breastfeed in neighbourhoods where few mothers currently are, or where it is not evident that other mothers are breastfeeding[56], children's centres and health professionals should focus efforts on increasing the numbers of mothers who breastfeed within a local area, and promote breastfeeding through peer-support and community groups.

Promoting an active learning environment

Growing up in a stimulating home-learning (or communication) environment is one of the key determinants of children's health and development. Evidence suggests that the home-learning environment accounts for between 16 and 20 per cent of the school readiness gap[57].

An Equal Start evaluated and identified the most crucial aspects of the home learning environment. These were found to be: shared conversation and reading, with positive and responsive parenting that is characterised by regular positive engagement; the setting and reinforcement of boundaries; parental responsiveness; and, secure parent–child attachment. All of these are promoted through increased knowledge of parenting.

Parents are the strongest enablers of children's communication and language development[58]. For example, engaged joint play and conversation between mother and child is associated with improved social and emotional development[59]. Direct interventions to build children's language and breadth of vocabulary are likely to have limited effect[60].

The care-giving environment during the early years is fundamental to children's development of secure emotional attachment. However, there is extensive international research evidence that approximately 35–40 per cent of all parent–infant attachments are sub-optimal[61]. Secure attachment to a trusted care-giver provides children with the confidence to explore their environment and people within this environment. This has a cumulative positive effect – successful attempts at exploration increase a child's self-confidence and encourage further exploration and curiosity[62].

Children do not only need to be engaged, they also need a 'contingent' relationship whereby they can initiate interaction, and where these advances are welcomed[63]. Responsive parenting, which is characterised by displays of warmth and affection, and positive reinforcement, also further enables children to fully explore their surroundings[64]. It is linked to positive health and development across the four key domains[65], particularly the development of pro-social behaviour, school achievement and self-confidence[66].

Dismissive or aggressive responses to children who attempt to engage with their parents, even in the earliest years, can have long-term negative effects on children's development. One study found that a mother's vocal responsiveness to her child's

distress explained 25 per cent of the difference in IQ as early as three months old. Insecure attachment in infancy – particularly for boys – is associated with externalising behaviour problems later in childhood[67].

As with all the drivers of child health and development discussed in this report, there is a social gradient in the quality of the home learning environment. For example, mothers from more advantaged backgrounds have been found to engage in longer interactive conversations with their children using more word types than mothers from mid to low socioeconomic backgrounds[68]. Parents from lower socioeconomic groups are also significantly less likely to read to their children on a daily basis[69].

To link back to our previous determinant, postnatal depression and other forms of mental illness are linked to an increase in insecure attachment in toddlers and less creative play[70]. However, providing a stimulating home learning environment has been found to partly buffer the negative effects of low income on children's outcomes[71], and has one of the biggest impacts on children's cognitive ability[72]. A child growing up in a poor household, but with a strong home learning environment with positive parenting, has every chance of achieving positive outcomes and future life success[73].

It is, however, important to note that both positive and negative parenting practices and home learning environments can be found across the socioeconomic spectrum[74], so parenting programme interventions focused solely on targeted populations will have limited impact. What parents *do* during the early years is therefore vitally important and can counteract other underlying disadvantages. Supporting parents to improve the learning that goes on at home has the potential to have a major impact on child outcomes, including school readiness, attainment and achievement up to the age of at least 16[75], and will 'benefit *all* children regardless of geography, language or societal circumstances'[76].

Children's health and development

As previously mentioned, parents and parenting are the biggest influences on children's health and development. However, access to and use of high quality and affordable preschool and nursery provision is another major contributor to optimal child outcomes.

An Equal Start focused on four closely correlated domains of outcomes for children: their cognitive development, how well they are learning to communicate and use language, the emergence of social and emotional skills, and their physical health.

Attention to **cognitive development** in the early years is crucial as these skills appear to remain more fixed after the early years than all the other domains[77]. Children's academic achievement and their future experience of the labour market, including wage levels, are closely linked to their cognitive development. Two particularly strong markers of children's cognitive development are their copying skills and the level of attention they pay to others. Copying-skill tests consistently show strong predictive power for later outcomes, although it is important to note that attention to the skills underlying copying – and then review through the use of copying tests – is likely to be a more powerful approach to improving outcomes[78]. Similarly, children who pay attention are more likely to perform well in school and to engage well in activities. Evidence shows that children from poorer backgrounds tend to have lower levels of cognitive development even in the earliest years[79].

There are two aspects of **communication and language**: comprehension of how the language is spoken, heard or read; and use of language. Language development, particularly creating sentences at age two, has been found to be a strong predictor of children's performance on entry to primary school[80]. Socioeconomic difficulty is negatively associated with children's language and communication development. The persistence of poor language and communication skills into adulthood is associated with more behavioural difficulties, higher rates of unemployment, low earnings and ill health[81].

Parents are the strongest drivers and enablers of children's communication and language development[82]. Consequently, as stated above, direct intervention to build children's language and breadth of vocabulary may have limited impact.

Recognising the role that **social and emotional skills** play in learning and school readiness is a key aspect of the Early Years Foundation Stage Framework (EYFSF). Children's social and emotional skills are largely formed by their experience of attachment with their parents (and primarily with their mothers), and through watching others. Research has found that child developmental problems are linked to lower attainment, truancy, teenage pregnancy and criminal activity rates[83], whereas social

adjustment – that is, how children successfully adapt to the social environment - is associated with improved labour market participation and higher wages[84]. Play helps children to build their social and emotional skills while navigating and testing new relationships. Self-regulation – that is, for example, the ability of children to calm themselves down when upset and cheer themselves up when sad - is another key component of children's social and emotional development.

Finally, children's **physical development** underpins all the other domains described above. Thus, from birth, children with physical difficulties may also have difficulties in other areas of their development. Low birth-weight – rates of which are higher in lower socioeconomic groups – is strongly correlated with poor outcomes in early and later life[85]. A high body mass index (BMI) in the early years is a risk factor for later obesity, which itself is associated with low self-esteem, behavioural problems, cardiovascular disease and risk of developing asthma[86]. Obesity also persists across the social gradient, but children from disadvantaged backgrounds are more likely to be overweight during childhood.

The current context: ***policy perspectives, provision and data monitoring within Sure Start Children's Centres***

Policy perspectives

The role of children's centres has changed considerably since the Coalition Government came to power in 2010, with the Government's Core Purpose of Sure Start children's centres[87] having a particular emphasis on child development and school readiness.

Accordingly, key policy measures of the new Government include expanding the existing current entitlement for three- and four-year olds, to include free part-time early learning places for the most disadvantaged 20 per cent of two-year olds from September 2013, to be doubled to around 40% in September 2014. However, many providers have reported difficulties in covering the cost of delivering the programme[88]. The health visiting service is also being strengthened by plans to recruit and train an additional 4,200 health visitors to help deliver the Healthy child Programme[89].

In terms of configuration, the new S*tatutory Guidance for Sure Start Children's Centres*[90] sets out how children's centres should support access to both targeted and universal

services provided either *directly* or *indirectly* by children's centres, while the Localism Act 2011 has facilitated a return to the earlier model of local determination of what constitutes children's centres.

The impact of policy changes on children's centre provision

The Government has retained the statutory duty under the Childcare Act 2006 for local authorities to provide enough children's centres to meet need. However, ring-fencing for Sure Start Children's Centre funding was abolished following the 2010 Comprehensive Spending Review, with resources absorbed into the wider Early Intervention Grant (EIG), which itself ceased to exist in April 2013. Funding for early intervention and family services is now part of the new local government funding scheme (the Business Rates Retention Scheme). By 2014/15, the available budget from which local authorities provide children's centres will have fallen by more than a third (down 36 per cent or £0.9 billion), since 2010[91]. Children's centres are anticipating further cuts[92] and are being counted on to do more for less.

The IHE's outcomes framework is based on what matters the most to children's outcomes. However, funding reductions have meant that some of those services that impact on the essential outcomes are either being cut or scaled back. For example, there is evidence that local authorities and children's centres are attempting to manage these cutbacks by reducing their universal offer and wider family-centred in-house provision, to focus on delivering a more targeted, focused approach[93]. In the 2013 return of 4Children's *Sure Start Children's Centre Census* just under a third of children's centres anticipated providing fewer services to parents next year[94]. Children's centres have also reported limited provision of English for speakers of other languages (ESOL) courses, job skills courses or Jobcentre Plus advice[95]. Ofsted inspection reports published since the new framework was introduced have similarly highlighted insufficient adult employment and training opportunities[96].

During field visits we found that many family-centred services to address the context in which parenting takes place, such as partnership working with Jobcentre Plus, are either being cut or the roles absorbed by children's centre staff as part of the reorganisation of children's centres and their delivery of services. Professionals within one case study area spoke of not feeling qualified to provide employment or debt advice, although this was now expected of them.

A number of Government reviews and parliamentary reports draw attention to the importance of children's centres as a key vehicle through which parents can be engaged in discussions about parenting and the context in which that parenting is taking place, these being the most significant influences on children's outcomes. For example, Sure Start Children's Centres were cited as having a valuable and important role to play in preventing poor children from growing up to become poor adults in Frank Field MP's review of poverty and life chances (2010)[97]. The All Party Parliamentary Sure Start Group[98] (APPG) also reported on evidence submitted to its inquiry that highlighted the significant role that children's centres can play in supporting families on the lowest incomes, as well as ameliorating some of the immediate symptoms of poverty. These include: linking parents to employment, information and support; providing training and volunteering opportunities; providing high quality childcare or supporting parents to access local childcare; and providing practical support, such as debt advice, for low-income parents.

It is imperative that local commissioners of early childhood services ensure that family-centred services are available and accessible to all families within the locality.

Existing measurement processes

Measuring outcomes is of utmost importance for children's centres as it can help to: inform effective decision-making, build a 'what works' evidence base; improve programmes; identify and understand users' need and the needs of the wider community; and account for resources used[99]. Without evidence of efficacy, children's centres are at risk of funding cuts.

Pre-measuring (gathering baseline data) forms part of the initial assessment when services meet a family to gather information on their needs. This information can then be used to determine the best ways to support them. Post-measuring occurs at the end of specific interventions or work with families (or members of families), or at regular intervals. Measures can also be used after the work has ended to see if positive changes in behaviour have been sustained and whether families are able to cope with new challenges. With sensible pre- and post-measures, children's centres can help to evidence their contribution to achieving improved outcomes for children.

In order not to overwhelm and overburden children's centres when they are already being stretched, we have tried to align the outcomes framework and associated measures with:

I. Existing frameworks, guidelines and initiatives: the Ofsted Framework for Children's Centre Inspection[100], the Early Years Foundation Stage Framework (EYFSF)[101], the Healthy Child Programme[102], and the Big Lottery Fund's A Better Start programme[103]
II. Existing data collection practices: information currently collected within children's centres and data collected/collated by different agencies, using a well-designed indicator for a different purpose, such as for national statistics
III. Measures already used within children's centres, such as validated measures integrated with specific parenting programmes.

Existing frameworks

The IHE's outcomes framework aligns well with research and policy advice on what children's centres should do. Indeed, Ofsted's subsidiary guidance[104] published in June 2013 referenced the IHE's *An Equal Start* as useful research for inspectors to review prior to conducting inspections.

The Ofsted Framework for Children's Centre Inspection[105] is the most common and accessible framework used to measure the quality of children's centres in England. The framework states that when making their judgements, inspectors must consider, among other key criteria:

I. The quality and impact of services in improving outcomes in the readiness of target children for school
II. Improved parenting and opportunities for target adults to participate in activities that improve their personal skills, education and employability
III. The effectiveness of partnerships with key agencies
IV. The extent to which centres provide effective services to those families most in need of help and support.

By following the IHE's evaluation framework, children's centres will not only improve outcomes for children, but will be better equipped to complete their Ofsted self-evaluation form (SEF)[106] and meet Ofsted's inspection requirements[107].

The framework also aligns with the 'core purpose' of children's centres, as defined in the *Sure Start Children's Centre Statutory Guidance*[108]. The statutory framework articulates the ways in which children's centres can support the achievement of improved child development and school readiness, through:

I. Promoting parental mental health and parenting skills
II. Improving the skills that enable parents to access education, training and employment
III. Addressing risk factors in the context in which parenting takes place to ensure that children and families are free from poverty.

The guidance draws attention to evidence that universal adult learning and employment support, as well as information for families, such as benefit or debt advice, has been proven to make a difference to children and families. Such universal activities can engage many of the families in need of extra support so that they become receptive to appropriate targeted activities. Children's centres can therefore be confident that they are fulfilling their statutory duty when embedding the outcomes framework.

Further information on how each of the outcomes and associated measures align with statutory frameworks and non-statutory guidelines can be found in the main tables within this technical report.

Current data collection measures and practices

The majority of the children's centres that we visited were confident that they were continuing to work towards achieving most of the IHE's essential outcomes. However, it emerged that none of the centres were currently measuring their contribution towards achieving all of the essential outcomes, and certainly not through the use of standardised and validated quantitative measures.

Where standardised measurement tools were used, they were integrated with specific programmes, such as Triple P[109] or the Solihull Approach[110], and were thus only used

with a small number of targeted families. The fourth report from the Evaluation of Children's Centres in England (ECCE), found that evidence-based services to address parenting tend to reach only very few users, with a typical centre engaging around 22 to 25 parents on such evidence-based courses each year[111].

The evaluation and monitoring frameworks developed and used within the majority of participating children's centres were typically shaped by:

I. The Ofsted framework for children's centre inspection[112]
II. The Every Child Matters outcomes[113]
III. Local community needs analyses.

Some of the local authorities that had participated in the Payment by Results (PbR) trials had also chosen to incorporate some of the trial measures, such as breastfeeding rates and sustained engagement, into their evaluation frameworks.

The best children's centres have been found to make good use of data and do not rely on anecdotal evidence[114]. They also continue to track children and family outcomes when children and families leave[115]. Overall, we found evidence of more advanced and established evaluation frameworks and measurement regimes within children's centres integrated with schools. This apparently eased data linkage and the tracking of progress made by children and families.

What also emerged from our research was that children's centres are generally confused about what they should be measuring and why, and feel under pressure to "measure absolutely everything", "just in case"[116] the information might be of value later. A lack of clarity and understanding around outcome measurement sometimes resulted in children's centres having too much data to make sense of, with over-stretched staff and frustrated, bored users. Having no measurement standardisation also made it difficult for children's centre managers and commissioners to compare and demonstrate the effectiveness of children's centres within the local area.

However, during field visits we were pleased to hear that despite cutbacks, and in the context of changing management and delivery approaches, many local authority areas are continuing to work hard to improve outcomes for children by ensuring that services work together to address the key drivers of good outcomes for children – specifically

parenting, the context in which parenting takes place, and the domains of children's health and development. Indeed, a number of local authorities have started to align their own evaluation frameworks with the IHE's outcomes framework, which is fantastic news for children and families. However, children's centres told us they now urgently need help with how they can work with partners to start consistently measuring their impact when embedding the outcomes framework.

Measuring what is important

Within this guidance document, the IHE presents a suite of measures that will help children's centres to demonstrate their contribution to the achievement of the essential outcomes – the 'building blocks' that evidence suggests if you get right, will lead to good outcomes for children.

The outcomes framework was guided by the principle that children's centres need to be *focusing on and measuring what is important, not just what can be easily measured.*

This is a critical point: measurement for measurement sake will not provide children's centres with the 'right' information – the information that inspectors, investors, managers, commissioners and other decision-makers need in order to help inform and improve services, and that will show that outcomes for children are improving.

Using independent, nationally accepted and standardised, quantitative measures, selected for their reliability and validity, can help children's centres to recognise change and confidently demonstrate that such change is at least partly attributable to an intervention that they have made – rather than as a direct result of other events or 'variables', or simply because things have improved naturally. Quantitative measures can also make it easier for commissioners to compare and demonstrate the effectiveness of children's centres within and across local areas, and can help identify which activities are less effective and thus should be changed.

Although relevance can be increased through the use of locally-developed or non-standardised tools, issues of validity and setter bias arise where they have not been validated externally. The benefits of using standardised, validated tools outweigh the benefits of increased relevance.

By implementing the IHE's outcomes framework and associated quantitative measures, children's centres will be both improving outcomes for children and dispelling criticism that they have a limited evidence base, which will help to keep centres open, funded and thriving.

However, developing an evaluation framework based on *what matters the most*, not *what can be easily measured* has been particularly challenging because there has been a lack of research in this area. Nevertheless, we have sought to seek out the most appropriate, currently available measures for each of the essential outcomes. These will help to inform better measurement of progress towards improved outcomes for children.

Methodology

The process of identification, review, and selection of adequate measures for the outcomes framework involved a comprehensive approach: a literature search of relevant instruments and field visits, and ongoing academic input from an expert advisory group comprised of academics, practitioners, and policy makers.

I. Review of the academic literature:

Owing to time and budget constraints, we were unable to undertake a systematic review of the literature. However, a comprehensive review of the available measures was performed with the aim of identifying available data sources and tools.

The initial process of review of the available measures entailed identifying available data sources and tools which could be potentially employed to measure one or more of the 22 proposed outcomes for children's centres. Measures that did not correspond to any of the 22 proposed outcomes were excluded.

The identified measures were then evaluated on additional criteria relevant to the project aims, such as how reliable and valid they were. 'Reliable' indicators and measures are ones that produce consistent results when replicated by others, while 'valid' indicators and measures capture the concept that they purport to measure. A

tool was considered measurable and accurate if a relevant evaluation existed which found the tool to be as such (that is, it was evaluated as having good reliability and validity). Judgements of practicality and efficiency of each instrument were based on whether or not the instrument involved a simple procedure that feasibly could be undertaken by children's centres. Measurement instruments incorporating large inventories of items (more than 50), and/or complex methods of scoring, were considered to be impractical for use by children's centres. Measurement tools which were initially considered measurable, accurate, practical and efficient at this stage were then further considered against a more detailed set of criteria as follows:

i) Validity: Has the measure been validated in the UK (and, for different ethnic groups, for example, being made available in different languages)?
ii) Responsiveness: Is the measure sensitive to changes over time?
iii) Administration environment: Can the measure be performed in an early-years setting?
iv) Recommended administrator: Can the measurement be administered by children's centre staff and/or parents?
v) Administration frequency/duration: Can the measure be measured in a reasonably short amount of time, for example, over one to two sessions?
vi) Simplicity of using the measures: Does the measure incorporate simple scoring analysis methods? Are the administration, measurement and analysis instructions clear and unambiguous?
vii) Practitioner training: Is extensive training required for children centre staff in order to administer, measure, and analyse the results of the measurement tool?
viii) Cost considerations: Is the measurement tool freely available or does it come with a purchase cost – and if so, is that cost reasonable or considerable?
ix) Additional equipment required: Is any additional equipment required for administering the measurement tool (such as tracking software, computers)?
x) Continuity with existing measures/frameworks: Does the measurement provide continuity with existing measures and frameworks that are already applied and/or routinely collected by or for children's centres, or can be derived from other existing sources?
xi) Measurement of multiple domains: Does the instrument include measurements that cover multiple domains of childhood outcomes (hence providing efficiency)?

These criteria were considered collectively when assessing the appropriateness of a measurement instrument for meeting the project aims.

II. Field visits:

Workshops and interviews were undertaken in 22 children's centres within eight areas across England: Warwickshire, Birmingham, Knowsley, Gateshead, Suffolk, Essex, Lambeth and Wiltshire. We also spoke to commissioners, practitioners from partner agencies, data managers, advisory groups and elected members.

In order to ensure valid and generalisable research, we sought to undertake fieldwork in areas that reflect a mix of delivery contexts: urban, suburban and rural areas; areas with high and low political and ethnic diversity; high and low catchment area size; and areas with widespread versus pockets of deprivation. A purposive sample of children's centres was then identified from within our selected local authority areas.

A number of the areas visited were selected in Phase I owing to their geographical, socioeconomic and demographic spread. Many of the same local authorities kindly agreed to also participate in Phase II. One member of the research team visited each local authority area for a one- to two-day period.

Prior to the visits, surveys were developed and distributed to a central person for dissemination in order to explore what, if any, validated measurement instruments were currently being used that aligned with the 'essential outcomes'.

III. Input from an expert advisory panel:

Following on from *An Equal Start*, we brought together an advisory group of practitioners, senior managers, leading academics and policy officials to respond to our work. They acted as 'critical friends' and helped to synthesise the academic evidence and practice-based understanding.

IV. Consideration of the evidence:

The final set of suggested measures – indicators and measurement tools – does not represent a definitive list of measures, but rather the measures generally considered the most appropriate for children's centres overall, based on the selection process detailed above. Some other measures are still valid and may be more appropriate in some circumstances (that is, where they are already embedded and staff are trained in their administration). Also, for some of the measures identified based on our selection criteria as being the most appropriate to align with the outcomes framework, there are small purchasing, training and/or re-accreditation costs attached. We appreciate that we are operating in difficult financial times, so where this is the case, we have strived to identify an alternative tool that is cost-free and easily accessible.

However, we do believe that utilising a consistent set across the country would help commissioners and research in this area, hence why we have strived to identify the most appropriate measure, or set of measures, for each outcome.

As we wanted to ensure that any changes seen using the measures were a reliable indicator of progress achieved, we have needed to rely on measures that were judged to be reliable according to the academic literature. However, there has not been enough research on how best to measure outcomes – especially the outcomes included in the outcomes framework – using quantitative measures within children's centres. We have therefore needed to recommend a wide range of measures that have been tested in other environments, such as medical settings and for research purposes. Consequently, the IHE makes a number of recommendations for further research, which can be found later in the report. A matrix mapping the selected measures against where further research is necessary is included in the Appendix.

Despite these limitations, we believe that there is value in sharing the measures we have found with children's centres and commissioners with a view to helping children's centre managers to start to consider how they can reliably evidence the impact of the important work they do.

The measures

Children's centres have to work with others to improve outcomes. Accordingly, children's centres should utilise data from a wide range of sources. To achieve and measure the essential outcomes most effectively, a whole-system approach will be required.

The following guidance, therefore, has been produced to support children's centres, local authorities, health and employment services to implement and measure the impact of a whole-system approach to improving outcomes for children.

The outcomes framework will need to be approached in three ways. For some of the outcomes:

I. Children's centres will be responsible for collecting data
II. Children's centre data managers will need to work with partners to obtain data
III. A whole-system approach will be required to engage families and collect, collate and share data.

Children's centres have data collection responsibilities for 20 of the 22 outcomes within the evaluation framework. However, a holistic, whole-system approach will be necessary to achieve and measure the majority of the outcomes successfully.

For all of the essential outcomes, we present a table that describes:

I. The essential outcome(s) – numbers correspond to outcome numbers used in *An Equal Start*
II. Selected associated measure(s)
III. Indicator descriptors (where appropriate)
IV. Which agency or agencies are responsible for administering the measure(s) and/or collecting, collating and/or sharing data
V. The rationale for the measure(s)
VI. Existing administrative data, geography and timeliness
VII. Data collection and analysis
VIII. Benchmark information
IX. A description of aligned statutory frameworks/non-statutory guidelines/ initiatives.

A glossary of key terms used within this guide can be found in the Appendix.

Figure 3 Areas for focus, outcomes and measures

Areas for focus	Essential outcomes identified in *An Equal Start*	Measures
Effective outreach	A. Effective outreach and sustained engagement with the wider community, with a particular focus on the most disadvantaged families	Indicator: % of disadvantaged and all families with young children (0-5) registered and who have sustained contact with children's centre (community and population-level measure).
Children are developing well	1. All children are developing age appropriate skills in drawing and copying	Measures: Non-statutory guidance to support review of children's development in the Early Years Foundation Stage Framework (EYFSF) and the Early Years Foundation Stage Profile (EYFSP) / Ages and Stages Questionnaire third edition (ASQ-3) and Ages and Stages Questionnaire Social-Emotional (ASQ:SE) (Healthy Child Programme).
	2. Children increase the level to which they pay attention during activities and to the people around them	Measures: EYFSF & EYFSP / ASQ-3 & ASQ:SE.
	3. Children are developing age appropriate comprehension of spoken and written language.	Measures: EYFSF & EYFSP / ASQ-3 & ASQ:SE.
	4. Children are building age appropriate use of spoken and written language	Measures: EYFSF & EYFSP / ASQ-3 & ASQ:SE.
	5. Children are engaging in age appropriate play	Measures: EYFSF & EYFSP / ASQ-3 & ASQ:SE.
	6. Children have age appropriate self-management and self control	Measures: EYFSF & EYFSP / ASQ-3 & ASQ:SE.
	7. Fewer children born with low birth weight	Indicator: % of term babies born with low birth weight (Public Health Outcomes Framework).
	8. Fewer children with high or low Body Mass Index	Indicator: % of children with high or low BMI (National Child Measurement Programme).
Parenting and parent context enables good parenting and child development	9. Fewer mothers exposed to tobacco smoke during pregnancy	Indicator: % of women identified as being exposed to carbon monoxide (CO) during pregnancy. Indicator: % of households with at least one smoker: referred to smoking cessation programmes; who set a quit smoking date; who ultimately quit. (Vital Signs Monitoring, Public Health Outcomes Framework)
	10. More mothers who breastfeed	Indicator: % of mothers who totally or partially breastfeed at initiation, 6-8 weeks and longer (ideally 3-4, 6 and 12 months) (Vital Signs Monitoring). Indicator: % of mothers attending breastfeeding / peer support groups.
	11. More parents regularly talking to their child using a wide range of words and sentence structures, including songs, poems and rhymes	Measure: The Early Home Learning Environment Index (EHLEI)
	12. More parents are reading to their child every day	Measure: EHLEI
	13. More parents are regularly engaging positively with their children	Measure: Keys to Interactive Parenting Scale (KIPS)
	14. Improved parental responsiveness and secure parent-child attachment	Measure: KIPS
	15. More parents are setting and reinforcing boundaries	Measure: KIPS
	16. More parents are experiencing lower levels of stress in their home and in their lives	Screening - for health professionals: Measure: General Health Questionnaire (GHQ), Patient Health Questionnaire (PHQ-9), or similar (Screening for depression by health professionals) Other practitioners: Measure: Life Satisfaction and Affect Balance (OECD measures of subjective well-being)
	17. More parents with good mental wellbeing	
	18. More parents have greater levels of support from friends and/or family	Measure: Multi-dimensional Scale of Perceived Social Support (MSPSS)
	19. More parents are improving their basic skills, particularly in literacy and numeracy	Indicator: % of children's centre users with low-level qualifications achieving entry, foundation and intermediate-level numeracy and literacy qualifications.
	20. More parents are increasing their knowledge and application of good parenting	Measure: KIPS
	21. More parents are accessing good work or developing the skills needed for employment, particularly those furthest away from the labour market.	Indicator: % of parents from households where someone is in work Indicator: % of families identified as willing / able to work in receipt of job-seekers allowance and low income benefits. Indicator: % of parents with increased 'satisfaction with allocation of time'. Indicator: % of families attending and completing 'work readiness' and learning skills programmes. Indicator: % of disadvantaged and all families accessing high quality, affordable early education (National Statistics - Source: DWP/HMRC/Early Years and School Census).

Outcome	**A. Effective outreach and sustained engagement with the wider community, with a particular focus on the most disadvantaged families**
Indicators	• Percentage of disadvantaged and all families with young children (0–5) registered and who have sustained contact with children's centre (community and population-level measure).
Indicator descriptors	Numerator = Number of disadvantaged and all families with children under five, registered, and who have sustained contact, with a children's centre. Denominator = Total number of disadvantaged and all families with children under five in the reach area (multiplied by 100).
What do children's centres need to do?	Children's centres should collect registration and attendance data for: **i**. targeted, and **ii**. other families who access children's centres.
What do others need to do?	The Department for Work and Pensions (DWP) and health professionals should consistently and accurately share relevant data – including benefits and live birth data – with children's centres, to help them reach and engage with those families who are likely to benefit from services the most. Local authorities should provide children's centres with data on the number and demographics of families within the children's centre catchment area. All agencies should work together as part of a holistic approach to identify and engage 'hard to reach' families within the community. In Frank Field MP's review of poverty and life chances (2010)[117], registration of births by children's centres was recommended as a means of increasing engagement. A recent report from the All Party Parliamentary Sure Start Group (APPG)[118] also made explicit the benefits of in-house registering, which include: improved reach; parental re-engagement with children's centre services; a reduction in stigma; acceptability to parents; increased involvement by fathers; and raising awareness of services for 0–2-year-olds. The report called on the Department for Education and the Home Office to send out a 'clear and unambiguous message' that it expects local authorities and Registrars to make

	this happen and consider amending the children's centre guidance to mention explicitly the provision of birth registrations in centres. We support the inquiry recommendation for cross-government political commitment for the provision of birth registration within children's centres.
Rationale	We align our evaluation framework with the *Ofsted Inspection Framework for Children's Centres*[119], which explains how centres will be judged on the extent to which they ease access to high-quality early education through in-house or external provision. By collating data to support the above indicators, local authorities will be able to evidence how well local children's centres are performing in reaching and engaging all families, and particularly those families identified as being in greatest need. Versions of the above indicators were used during the children's centres payment by results (PbR) trials. A feasibility study for the payment by results trials[120] found that both of these indicators were measurable. The original wording of the first instruction was: 'percentage of families with children under 5 registered with children's centres'. However, it was felt that there was a risk that children's centres would focus on *quantity*, as opposed to *quality* and *sustained* contact, with resources diverted from families with the highest need. Local authorities felt that children's centres should measure the level, quality and appropriateness of the support provided to families, and not just the number of registrations. The indicator, which remains measurable, has therefore been adapted to incorporate the quality of engagement and provision (through the proxy measure of 'sustained engagement'). A number of local authorities that participated in our research are continuing to use a measure of outreach introduced during the PbR trials, for the valuable data it provides.
Existing administrative data, geography and timeliness	• Number of children under five data is determined from child benefit data, which covers around 96 per cent of children and currently provides the best fit between census years and numbers found on the Revenue and Customs (HMRC) website. However, owing to recent reforms to child tax credits, high-earning families will no longer be eligible for child tax credits. Local authorities will therefore need to

work closely with children's centres to help identify those families not in receipt of benefits with young children, as children and families are at risk of poor outcomes across the social gradient. The data is provided by Lower Level Super Output Area (SOA) for each region by year. The SOAs can be sub-divided into the agreed reach areas for each children's centre to calculate total number of children under five in an area. Mid-year population estimates from the Office for National Statistics (ONS), numbers and percentages, are available per calendar year and at local authority, unitary authority and county level[121].

• New birth data: the mother's home address postcode at time of birth is used to determine local authority of residence. This data is provided to the local authority from health services. The ONS releases annual conception statistics around 14 months after the period to which they relate (as birth registration can be legally undertaken up to six weeks after the birth and the ONS requires three months to compile the conception statistics). Quarterly data is also released. ONS numbers of live-birth registrations are available per calendar year and at local authority, unitary authority and county level[122].

• Population data is provided by the ONS from census and mid-year estimates.

• Teenage pregnancy data is available for older teenagers (age 15-plus). The ONS provides the number of under-18 conceptions quarterly to local authorities at top-tier and district level, and under-16 conception statistics to local authorities at regional and local authority level (top-tier and district), using three-year aggregated data. The Public Health Outcomes Framework also collates information on under-18 conceptions. Hospital Episode Statistics[123] provides data on maternal episodes (delivery), where the mother is aged between 12 and 17, as a proportion of all maternal episodes (delivery). Data is available per financial year and at local authority, unitary authority and county level (based on postcode address).

• Data on black and minority ethnic (BME) groups is based on self-reported methods via census data collections. Data on BME children aged 3–4 years is gathered from the Early Years Census and school census returns (conducted by local authorities), which can be matched to SOA areas.

	• Lone-parent data is available from census data at SOA level, and Child Tax Credit (CTC) figures, although census and CTC figures do not align accurately. • Disability statistics are available from local registers or nationally estimated proportions using: Special Educational Needs (SEN) figures – 'total number of children with SEN statements (including nursery)'; census data – 'number of children with limiting long-term illness living in private households' (a broad definition so this indicator is likely to be an over-estimate); and Department for Work and Pensions (DWP) records of Disability Living Allowance payments (published quarterly). Data is available at local authority level. The exact number of disabled parents in the UK is not known. Therefore, approximate percentages for each area are built up over time using intelligence from adult social care and children's centres. Data on claimants receiving Disability Living Allowance can be obtained at SOA and local authority level on a quarterly basis, although this does not include all disabled persons nor can the data specifically identify parents of children under age five. • Index of Multiple Deprivation Scores and Income Deprivaion Affecting Children Index data is available from the Department for Communities and Local Government and the Child And Maternal Health Intelligence Network (ChiMat) data atlas[124]. Data is available at ward level across England. ChiMat also aggregates statistics on children who are eligible for and receive free school meals (FSM), and households considered homeless which contain one or more children or pregnant women. The number of working families benefitting from the childcare element of Working Tax Credit data is available from the HMRC website and at a SOA level. DWP-administered benefits and Jobseeker's Allowance claimants statistics are available quarterly from: www.gov.uk/dwp • Social Care data: data on children subject to child protection plans (pre-birth and under-fives) and on the 'rate of children looked after per 10,000 population aged under 18' is available from the Department for Education (DfE). Data on the rate of looked after children (LAC) is also available via ChiMat Child Health Profiles[125]. • Another source of information is children's centre monitoring data, including the rate of family attendance and engagement with universal and targeted services, and outreach contact information. This information can be combined with

	knowledge from tools and frameworks (including the Common Assessment Framework [CAF], Family-CAF [fCAF] and Team around the Child [TAC]), multi-agency groups, and the community.
Data collection and analysis	'Greatest need' and 'sustained contact' have not been defined by the Department for Education. This is because defining these terms is problematic as each family is unique, with different levels of need and resilience, and will require different levels of contact. There is evidence that for measurement purposes, children's centres that trialled PbR prefer to define 'sustained engagement' as being at least five face-to-face contacts in a 12-month period. Further evaluations are required to test the suitability of this definition. The Ofsted Framework for Sure start Children's Centre Inspection[126] defines **'target groups'** as follows: The groups and families the centre identifies as having needs or circumstances that require particularly perceptive intervention and/or additional support. The following list is not exhaustive and does not imply that young children or families in any of these categories require additional support. The target groups will vary according to the centre's identification of its community and their needs but in any particular centre may include: • lone parents, teenage mothers and pregnant teenagers • children from low-income backgrounds • children living with domestic abuse, adult mental health issues and substance abuse • children 'in need' or with a child protection plan • children of offenders and/or a parent/carer in custody • fathers, particularly those with any other identified need, for example, teenage fathers and those in custody • children and adults with protected characteristics**,** as defined by the Equality Act 2010

	• children who are in the care of the local authority (looked after children) • children who are being cared for by members of their extended family such as a grandparent, aunt or older sibling • families identified by the local authority as 'troubled families' and who have children under five • families who move into and out of the area relatively quickly (transient families), such as asylum seekers, armed forces personnel and those who move into the area seeking employment or taking up seasonal work • any other vulnerable groups or individual families including young children and families identified as at risk of harm by other services such as adult social care, schools, police, and health services. Children's centres and linked services will be required to evidence the extent to which target populations register with children's centres, and go on to attend and participate in in-house and/or external targeted provision. Recording, monitoring and sharing this data will also enable local authorities to evidence the unique, positive journeys families take through children's centres and linked services – i.e. from outreach work within the community with target families, through to them accessing inclusive universal services within the centre. As families develop trusting relationships with staff and other users, and build in confidence, they may become more receptive to registering for and participating in targeted provision that might be beneficial, which can provide families with the knowledge, confidence and skills to provide a safe, healthy and stimulating home learning environment for their child or children.
Benchmark information	Community profiles differ from area to area, as does available data and data sources on local populations. Children's centres and local authorities should therefore agree standardised base line and target outreach and engagement statistics, based on existing administrative data for the local Joint Strategic Needs Assessments (JSNA), and local population data. Ideally, 100per centof families who need help should have access to it. Children's centres therefore need to increase the % of families they reach and engage year on year. Local targets need to be agreed with the local authority.

Key frameworks/ guidance that align with this outcome and measures	• The Core Purpose of Children's Centres[127] is to improve outcomes for young children and their families and reduce inequalities between families in greatest need and their peers. • Access to services by young children and families is a key judgement made during children's centre Ofsted inspections[128]. • The *Sure Start Children's Centres Statutory Guidance*[129] states how local authorities should demonstrate that all children and families can be reached effectively, and in turn, can easily access services. Effective outreach based on local needs analysis also needs to be evidenced.

Outcomes	**1. All children are developing age-appropriate skills in drawing and copying.** **2. Children increase the level to which they pay attention during activities and to the people around them.** **3. Children are developing age-appropriate comprehension of spoken and written language.** **4. Children are building age-appropriate use of spoken and written language.** **5. Children are engaging in age-appropriate play.** **6. Children have age-appropriate self-management and self-control.**
Selected measures	1. Early Years Foundation Stage (EYFS) Profile[130] – associated measures: • Percentage of children achieving a 'good level of development' (GLD) on the EYFS Profile at age five (population-level measure of school readiness)[131]. • Narrowing the gap between the lowest achieving 20 per cent in the EYFS Profile and all children (population-level measure of reduced inequalities)[132]. 2. Non-statutory guidance to help practitioners and inspectors review children's development in the EYFS, such as *Early Years Outcomes*[133] */ Development Matters*[134].

	3. Ages and Stages Questionnaire third edition (ASQ-3)[135], and Ages and Stages: Social and Emotional questionnaire (ASQ:SE)[136].
What do children's centres need to do?	Children's centres should monitor the developmental milestones of children from birth until they transition to primary school using the non-statutory materials to support the EYFS statutory framework, such as *Early Years Outcomes*[137] or *Development Matters*[138]. Practitioners may also wish to utilise the DfE-funded *Early Years Developmental Journal* (EYDJ)[139] with parents, which was developed to supplement the Personal Child Health Record (PCHR) also known as the 'Redbook'[140]. This Journal is particularly useful if you know or suspect that your child or a child who you are helping is unlikely to progress in the same way or at the same rate as other children. All of these non-statutory guidelines provide overviews of developmental milestones and have been published to support practitioners with the statutory requirements of the EYFS Framework[141]. Further work is necessary to validate the 'good level of development' and 'narrowing the gap' measures associated with the EYFS Profile, and the non-statutory guidelines[142] to support the EYFS Framework[143] for measurement purposes. The Department for Education is currently consulting on changes to the statutory assessment in the EYFS framework[144] and we will update this guide in accordance with the recommendations of that consultation. In the meantime, EYFS Profile data should be monitored by children's centres to track and compare the longer-term impact of their work to improve outcomes for children. Work is also in progress to introduce a new integrated check at 2-2.5 years which is likely to include the use of the Ages and Stages questionnaire third edition (ASQ-3)[145] and Ages and Stages: Social and Emotional questionnaire (ASQ:SE)[146], as *validated* tools to monitor the health and development of all children aged 4 months to 60 months, at different developmental stages. As they are used widely by the health profession, we recommend that children's centre staff work closely with health visitors to use the data from these tools to screen and support

	children's health and development outcomes and to help deliver the Healthy Child Programme[147]. Guidance to support information sharing between the Department of Health and the Department for Education can be found on the Foundations Years website[148].
What do others need to do?	Local authorities should make EYFS Profile data available to children's centres in an appropriate format for data matching. This data is collected within the local authority so should be achievable. Local authorities are under a duty to return EYFS Profile data to the relevant government department. Ideally, data-sharing agreements should be made between families and all early childhood services to enable data linkage for tracking purposes. The Ages and Stages questionnaire[149] is the validated screening tool used by health visitors to support practice as part of the Healthy Child Programme (HCP)[150]. Health visitors should work closely with children's centres to share data and monitor the developmental progress of children.
Rationale	The 'good level of development' (GLD) measure used within the Government's Social Mobility strategy is the most widely used single measure of child development in the early years. However, recently there have been significant changes to the way children are assessed at the end of the EYFS through the EYFS Profile. In the new EYFS Profile, children are defined as having reached a GLD at the end of the EYFS if

	they achieve at least the expected level[151] in the early learning goals in the prime areas of learning (personal, social and emotional development; physical development; and communication and language) and in the specific areas of mathematics and literacy. All of the children's centres that participated in our research were using non-statutory guidance that provided overviews of developmental milestones[152] to support the revised EYFS Framework[153], or a locally-developed tool based on these guidelines, to monitor children's development. The EYFS Profile is aligned closely with the outcomes framework and uses a nationally established measure. We therefore recommend that children's centres continue to utilise non-statutory guidance documents to support the revised EYFS Framework[154] in order to understand and monitor each child's development pathways[155]. However, as the revised (and old) measures[156] associated with the EYFS Profile, and non-statutory guidance to support the EYFS Framework[157], have not yet been validated for use as measurement tools, nor have they been used in recent research or evaluations, we have to reiterate that in order to conduct rigorous service evaluations and research, validated tools should be used. For this purpose we recommend the validated ASQ-3[158] and ASQ:SE[159] as the most appropriate. The ASQ-3[160] is comprised of a series of 19 age-appropriate questionnaires to be completed by parents/carers. The tool has been designed to screen the developmental performance of children between the ages of four and 60 months in the areas of communication, gross motor skills, fine motor skills, problem solving, personal-social skills, and overall development across time. The tool received an assessment rating of 'A' for reliability and validity in the assessment by the California Evidence-Based Clearinghouse[161]. Relevant psychometric research has found that reliabilities (measured by internal consistency – test-retest and inter-rate reliabilities), were consistently high[162]. The ASQ also achieved excellent validity at .82 - .88 and reliability: test-test reliability at .91. Concurrent validity was assessed by comparing children's ASQ with their classification on other

	standardised assessments, including the Bayley Scales of Infant Development and, for children over three years, the Stanford-Binet Intelligence Test. The ASQ showed an overall 83–95 per cent agreement[163]. The ASQ:SE[164] consists of a series of eight age-appropriate questionnaires to be completed by parents/carers. The screening tool can help determine whether a child's development appears to be progressing as expected. From 2015, early years settings and health professionals will be required to work together to produce a single comprehensive report for the Integrated Review at age 2–2½[165]. It is likely that the review may draw heavily on the ASQ-3, which is the tool currently being piloted by areas involved in the testing of the integrated review[166]. It is also worth noting that the internationally validated Early Development Instrument (EDI) has recently been piloted in Scotland to measure the school readiness of *all* children as they enter primary school. Unlike the EYFS and Ages and Stages screening tool, the EDI is a population-level research tool, which means it measures developmental change or trends in populations of children, and is not used to screen individual children. Findings from the pilot indicate that although the tool has been determined fit for purpose, it is not going to be rolled out in Scotland owing to resource implications. Other issues that emerged during the pilot included the fact that measuring population-level outcomes has little appeal for practitioners who are more familiar with screening/diagnostic tools with individual children – so the tool has been difficult to 'sell'.
Existing administrative data, geography and timeliness	Data on children achieving a good level of development at age five is published by the Department for Education as a national statistic in 'Early Years Foundation Stage Profile Results in England', and at local authority and county level on the Gov.UK website[167]. Other relevant data include the local authority-level child health

	profiles, collated by the Child & Maternal Health Intelligence Network (ChiMat). The GLD indicator is also one of the Marmot indicators published by the London Health Observatory (LHO). The EYFS Profile is completed in the final term of the academic year in which the child reaches the age of five. EYFS raw data is held in the DfE's National Pupil Database. Local authorities hold the data at child level. Postcodes can then be matched to the SOA to provide data for reach areas. Official statistics are published on a regular basis by the DfE National Pupil Database. National statistics – data available from the DfE[168]. 'Narrowing the gap between the lowest achieving 20 per cent in the EYFSP and all children': the gap between the median EYFSP score of all children in the local authority area and the mean score of the lowest achieving 20 per cent is calculated as follows: the median score of the children in the area, where in an ordered list of scores, half of the children would lie above and half would lie below the score of the child divided by the mean score of the lowest achieving 20 per cent of children in the area.
Data collection and analysis	Each **ASQ-3** questionnaire should be completed by parents and carers, and should take approximately 10–20 minutes to complete. Where possible, questionnaires should be used with children from four months at four to six month intervals. No specific training qualification or license requirement is necessary to administer the scale. The questionnaire is available, for a fee, at the ASQ's website: agesandstages.com. See the Appendix for further information. Questionnaires are scored by totalling the domain scores for the questionnaire and comparing each domain score with the screening cut-off score. In relevant psychometric research[169], children falling below

	2.0 standard deviation (SD) were categorised as failing the questionnaire (to be described as 'scoring below the cut-off score'). These children should be referred for diagnostic assessment, whereas community referral should be made for children scoring close to the cut-off.
Benchmark information	41 per cent of children were assessed as achieving a Good Level of Development in the EYFSP pilot[170]. The total average score was 32 points. However, rates vary for different local authority areas, so children's centres and local authorities should therefore agree standardised base line and target statistics, based on existing administrative data. For the ASQ-3, relevant psychometric research has determined a positive likelihood ratio (LR) of 3.8–4 (that is, the likelihood of testing positive for developmental delay, and thus failing the ASQ-3) and a negative LR of .13–.31[171] (the likelihood of testing negative for developmental delay and thus passing the ASQ). Research by Squires *et al* (1997)[172] reported that 14 per cent of children (n=209) scored at or below the standard deviation cut-off point. Skellern *et al* (2001)[173] identified 15 per cent of children (n= 15 per cent) as being developmentally delayed, using the ASQ-3.
Key frameworks/ guidance that align with this outcome and measures	• The statutory framework for the EYFS[174] • Non-statutory guidance: *Early Years Outcomes* (2012)[175]; *Development Matters* (2012)[176]; the Early Support *Early Years Developmental Journal* (2012)[177]. • The 'good level of development' on the EYFS Profile and the 'narrowing the gap'[178] indicators at age five are national indicators. • A critical part of the Healthy Child Programme[179] is the monitoring of children's physical and psychological development from birth through the early years. • The Integrated Review at age 2–2½[180], to be introduced from 2015, will bring together the two-year-old Progress Check[181] and the Healthy Child Programme[182] (which currently utilises the

	ASQ), and will use a single evidence-based tool, likely to be the ASQ. • The Wave Trust report (the addendum to *Supporting Families in the Foundation Years*)[183] recommends the use of evidence-based tools such as the ASQ and ASQ-SE in reviews of children's development from the earliest possible stages. • The Big Lottery's 'Better Start' programme[184] aims to improve outcomes for children in three areas of development: social and emotional development, communication and language development, and nutrition.

Outcome	**7. Fewer children born with low birth-weight.**
Indicator	• Percentage of term babies born with low birth-weight (population-level measure).
Indicator descriptors	Numerator = Number of live and still births born with birth-weight under 2500g Denominator = Total number of all live and still births occurring with a stated birth-weight Gestational age is strongly associated with birth-weight. Full-term babies weighing under 2500g are considered to have a low birth-weight. Pre-term is defined as 24 to 26 completed weeks, whereas full-term is 37 to 41 completed weeks.
What do children's centres need to do?	Liaise with local health services to obtain data.

What do others need to do?	Health care professionals are responsible for the measurement of low-birth-weight. Local authorities are responsible for collating data.
Rationale	The low birth-weight indicator has been selected as it aligns with existing data collection strategies and measures. Low birth-weight of term babies is included as an indicator for maternity and related pathways in the new Public Health Outcomes Framework[185].
Existing administrative data, geography and timeliness	Local authorities can utilise existing administrative data to evidence an area reduction in the number of children born with low birth-weight, although this is not linked to gestational age. Low birth-weight is currently monitored as part of the ONS Vital Signs return, per calendar year, at a local authority, unitary authority and county level. This data is published by the mother's usual area of residence. Birth-weight data is obtained from the birth notification recorded by the GP or midwife present at birth. The data gives the number of live births of low birth-weight in an area. However, areas should be cautious when making comparisons with other areas owing to differences in the total number of live births occurring. Low birth-weight data is available via the ONS's child mortality statistics[186], and via Public Health England's (PHE) Child and Maternal Health Intelligence Network (ChiMat)[187], and the Public Health Outcomes Framework Data Tool. Low birth-weight is also an indicator on ChiMat's Pregnancy and early years theme.
Benchmark information	In England and Wales, 7 per cent (n=50,918) of live births were low birth-weight (under 2500g) in 2012[188]. The proportion of babies who are of low birth-weight is generally similar in all regions across England[189].

Key frameworks/ guidance that align with this outcome and measures	• The Public Health Outcomes Framework[190]. • The low birth-weight indicator is currently collected and published at a national and local authority level via the ONS's Child Mortality Statistics[191]. Data is also available via ChiMat[192].

Outcome	**8. Fewer children with high or low Body Mass Index (BMI).**
Indicator	• Percentage of children with high or low Body Mass Index (population-level measure).
Indicator descriptors	Numerator = Number of primary school-age children in reception year (age 4–5) with valid height and weight recorded who are classified as obese plus number of primary school age children in reception year (age 4-5) with valid height and weight recorded who are classified as overweight. Denominator = Total number of primary school age children in reception year (age 4–5), with valid height and weight recorded.
What do children's	Liaise with local health services to obtain data.

centres need to do?	
What do others need to do?	Healthcare professionals are responsible for the measurement of BMI.
Rationale	The BMI indicator has been selected as it aligns with existing programmes. It is part of the National Child Measurement Programme (NCMP)[193], under which children are weighed and measured at school at age four to five. The standardised BMI measure is used to determine if children are underweight, a healthy weight, overweight or very overweight. It is seen as the most valid existing indicator of child weight measurement.
Existing administrative data, geography and timeliness	NCMP data is available from the Health and Social Care Information Centre. Percentage data is available at local authority, unitary authority and county levels (based on children's address postcode), and for each financial year.
Data collection and analysis	Local authorities are responsible for collecting data on children's height and weight from all state maintained schools. They can evidence the impact of work to tackle the determinants of child health and development by monitoring the prevalence of healthy weight at age 4–5 years, as well as the extent to which the gap is narrowing in the local authority area, using data gathered as part of the NCMP[194]. As part of the NCMP, children are classed as obese if their BMI is above the 95th centile of the reference curve for their age and sex according to the UK BMI centile classification.
Benchmark information	In the 2011-2012 return of the NCMP[195], in Reception, over a fifth (22.6 per cent) of the children measured were either overweight or obese. In Year 6, this proportion was one in three (33.9 per cent). Rates vary for different local authority areas[196], so children's centres and local authorities should therefore agree standardised baseline and target statistics, based on existing administrative data.

Key frameworks/ guidance that align with this outcome and measure	• As part of the NCMP[197], children are weighed and measured at school at age four to five.
Limitations	There are data challenges associated with utilising the standardised measure of BMI. For example, assessing the BMI of children is more complicated than for adults because a child's BMI changes as they mature. Also, these patterns of growth differ between boys and girls. Therefore, to work out if a child's BMI is too high or too low, both the age and sex of the child need to be taken into account. The National Institute for Health and Care Excellence (NICE) has recently published new guidance with lower thresholds for intervening to prevent ill health among black, Asian and other minority ethnic groups, who have increased risk of type-2 diabetes and other weight-related conditions[198].

Outcome	**9. Fewer mothers exposed to tobacco smoke during pregnancy**
Indicators	• Percentage of women identified as being exposed to carbon monoxide (CO) during pregnancy (community and population-level measure). • Percentage of households with at least one smoker: **i.** referred to smoking cessation programmes, **ii.** who set a quit-smoking date and **iii.** who ultimately quit (community and population-level measures).

Indicator descriptors	A decrease in percentage to evidence impact: Numerator = Number of women identified as being exposed to carbon monoxide (CO) during pregnancy (in wider community and in children's centres). Denominator = Total number of women (in wider community and registered at children's centre) (multiplied by 100). An increase in percentage to evidence impact: Numerator = Number of households with at least one smoker: i. referred to smoking cessation programmes, ii. who set a quit-smoking date and iii. who ultimately quit (in local authority area and children's centre catchment area). Denominator = Total number of households (in local authority and children's centre catchment area) (multiplied by 100).
What do children's centres need to do?	Children's centres are in a unique position to develop trusting relationships and work with families to improve outcomes for children. Part of this is supporting families to help them stop smoking or cut back. Children's centres can support data collection by measuring the smoking habits of all users at registration and at early engagement through: 1. Parent self-report feedback on: smoking during pregnancy and/or living in a household in which they are exposed to tobacco smoke. 2. Parent self-report feedback: on living in household with at least one smoker, as well as the number of people in the household: **i.** referred to smoking cessation programmes, **ii.** who set a quit-smoking date and **iii.** who ultimately quit.
What do others need to do?	Health professionals should work closely with the local authority, smoking cessation programmes and children's centres to develop and provide baseline data. Baseline data ideally will be gathered during the first maternity booking (the expected stage that pregnant women are likely to be in contact with maternity services), where information should be gathered on the: **1.** Number of women within the wider community identified

	(via discussion and/or testing), as being exposed to carbon monoxide during pregnancy. **2.** Number of households with at least one smoker: i. referred to smoking cessation programmes, ii. who set a quit-smoking date and iii. who ultimately quit.
Rationale	We recommend that health professionals working with children's centres aim to collect and collate data on smoking habits and smoking cessation using parent self-report information, given the lack of standardised measurement tools and the sensitivity of undertaking CO tests with parents. There is a high likelihood that smokers, or those who live in households with smokers, would not voluntarily attend children's centres if CO monitoring were a routine part of the service. However, there are data issues relating to parent self-reported smoking habits, with under-reporting common. Some mothers find it difficult to be open about their smoking habits during pregnancy and following childbirth, owing to the pressure on them to quit. Biochemical measures of carbon monoxide levels – CO breath tests, urine or saliva cotinine tests – are an immediate and more reliable method of gathering accurate data on the number of pregnant smokers or women with young children exposed to second-hand smoke at home than self-report measures alone[199]. We therefore recommend that health professionals, as part of statutory services, encourage pregnant women to undertake CO testing, and collect and share corresponding data. Collating smoking data from health, children's centres, smoking cessation services and administrative data will provide more far-reaching and accurate local monitoring data for local authorities although efficiently joining-up these data sources will be undeniably challenging without the development of robust data sharing agreements (see recommendations). 'Timeline follow back' (TLFB) for cigarette use, whereby participants are asked retrospectively to estimate their daily smoking habits over 30 days prior to the assessment, is another more reliable

	method of obtaining accurate smoking habit information from parents than relying on parent self-report data. However, the method involved is likely to result in high drop-out rates and missing data. Parents we spoke to during field visits also indicated that they were unlikely to complete home diaries, as it would feel like homework. However, children's centres and stop-smoking services may wish to utilise such methods with parents attending stop-smoking services (and who have therefore demonstrated willingness to engage), in order to produce more accurate and detailed information on smoking habits, including frequency and amount.
Existing administrative data, geography and timeliness	National and local data on the number of mothers exposed to tobacco smoke during pregnancy is currently available from the following sources: • Vital Signs Performance Framework for Primary Care organisations in England • Health and Social Care Information Centre's return on Smoking Status at Time of Delivery (SSATOD) – presented as part of Public Health England's Public Health Outcomes Framework Data Tool. • The quinquennial Infant Feeding Survey (monitoring smoking of mothers in England immediately before, or during, pregnancy) • Monitoring of the NHS Stop Smoking Service (NHS SSS) in England • Health Survey England (percentage smokers – national data, breakdown males/females) • Parents' self-reporting of smoking habits.
Data collection and analysis	As recommended by the National Institute for Health and Care Excellence (NICE), midwives have the opportunity to engage with all expectant mothers at their first maternity booking to assess their exposure to tobacco smoke, through discussion and encouraging carbon monoxide testing. However, there has been widespread,

	mixed reaction to the recommendation of CO testing, leading to NICE issuing a press statement[200] reinforcing the message that CO testing is not compulsory or meant to 'penalise' mothers. Rather, the use of the test is 'to ensure that pregnant smokers receive appropriate support to quit for the good of their unborn baby' or raise their awareness of the effects of their exposure to tobacco smoke within the household. Children's centres should strive to collect self-report data on smoking habits in a non-judgemental and supportive environment, in order to maximise the accuracy and reliability of data received. Parents need to understand the risk to their and their children's health as a result of smoking, and that children centre staff monitor smoking habits of their users in order to support users, their partner or others within the household to quit or cut back their cigarette use if they so wish. Support can either be through internal or external stop-smoking services or additional family support. Staff need to make it clear that they are not seeking this information in order to make parents feel guilty, and that they understand that for many smokers, smoking is a way of helping them to relax and/or a crutch, and that even cutting back (as opposed to stopping) cigarette use can be very challenging and is an achievement. Parents should also be provided with a number of self-report methods, for example through informal discussions with centre staff, surveys or even confidential cards for drop boxes, where parents can choose to remain anonymous or indicate if they would like help to stop or cut-back smoking, or to reduce their exposure to tobacco smoke. Finally, health professionals need to work closely with stop-smoking services, children's centres and linked services to track and monitor their identification of families who might benefit from smoking cessation advice or help.
Benchmark information	*National:* The latest available data suggests that the indicative benchmark

	rate for the number of pregnant women who smoked during pregnancy in England during 2012/13, based on the Women Smoking Status at Time of Delivery data collection in England, is 12.7 per cent.[201] However, this rate varies greatly between Strategic Health Authorities and Primary Care Trusts. The latest Infant Feeding Survey[202] reported that of those mothers who smoked before or during their pregnancy, over half (54 per cent) gave up at some point before the birth. Twelve per cent of mothers continued to smoke throughout their pregnancy, down from 17 per cent in 2005. NICE's *Quitting Smoking in Pregnancy and Following Childbirth Commissioning Guide*[203] provides an indicative benchmark rate of 0.27 per cent (approximately 270 per 100,000), for the number of pregnant women who smoke at first maternity booking and who are referred to an NHS Stop Smoking Service. This is based on the approximation of around 6 per cent, or 1,250, women out of 100,000 becoming pregnant each year. Of these women, approximately 21.5 per cent (or around 270 pregnant women per year), will be smoking at first maternity booking and referred to an NHS Stop Smoking Service. *Local:* Local authorities can refer to the Department of Health's 'smoking status at time of delivery' statistical collection[204] to obtain local statistics on smoking, which supplements the national information available from the quinquennial Infant Feeding Survey[205]. The 'smoking status at time of delivery' statistical collection occurs quarterly and provides a measure of the prevalence of smoking among pregnant women at Strategic Health Authority and Primary Care Trust levels. Data is available from the Health and Social Care Information Centre[206]. Variations in deprivation levels, smoking prevalence in the local

	population and demographics have a significant impact on the number of pregnant women who smoke in a local area, so we are therefore unable to provide local baseline measures. However, the commissioning and benchmarking tool available on the NICE website[207] can help local authorities to adjust national smoking figures to reflect local circumstances and obtain more appropriate local baseline measures.
Key frameworks/ guidelines that align with this outcome and measures	• 'Reducing rates of smoking throughout pregnancy to 11 per cent or less by the end of 2015' is one of the national ambitions of the Tobacco Control Plan (measured at the time of giving birth)[208]. This figure is based on the national baseline measurement of 14 per cent from the 2009/10 Department of Health 'smoking status at time of delivery' statistical collection[209]. As part of the plan, there is also support for data collection and monitoring of stop-smoking services. • 'Smoking at delivery' is also a key indicator for the maternity pathway of the new Public Health Outcomes Framework[210], with the overarching objectives of increasing healthy life expectancy and reducing differences in life expectancy and healthy life expectancy between communities.
Limitations	In the UK smoking surveillance systems are generally more sophisticated at the national and regional levels than at the local level (neighbourhood, ward and GP practice). This is because local data collection is based on parent self-report smoking data provided to professionals. However, research has found that self-reported smoking status underestimates the true level of smoking prevalence by 25 per cent. Parents we spoke to during our field visits support this finding. For example: "I tell staff that 'yes, I've quit', because that's what they want to hear, and then go outside for a smoke." [211] "Rather than scold parents for smoking, it's important to tell parents the risks to children, but also the challenges they're likely

	to face in attempting to cut down or stop. But ultimately, it's about rights and being able to make an informed choice. What would be helpful is a non-judgemental environment where information is provided, so that parents can be open."[212] Throughout our research, we also frequently heard the difficulties local authorities and children's centres face in receiving smoking data from health services. For example: "Health visitors have higher access to the population compared to lower numbers of children who come through the children centre's doors, but cross-referencing health and children's centre data is difficult, owing to data confidentiality"[213].

Outcome	**10. More mothers who breastfeed**

Indicators	• Percentage of mothers who totally or partially breastfeed at initiation, 6–8 weeks and longer (ideally 3–4, 6 and 12 months) (population and community-level measure). • Percentage of mothers attending breastfeeding/peer-support groups (community-level measure).
Indicator descriptors	Numerator = Number of infants recorded as being *totally* breastfed at 6–8 weeks and later checks, plus number of infants recorded as being *partially* breastfed at 6–8 weeks and later checks. Denominator = Total number of infants due for 6–8 week check and later checks (multiplied by 100). Numerator = Number of mothers attending breastfeeding/peer-support groups within the children's centre/wider community. Denominator = Total number of expectant/new mothers engaging with the children's centre / within the wider community (multiplied by 100).
What do children's centres need to do?	Children's centres are in a unique position to develop trusting relationships and work with families to improve outcomes for children – and part of this is supporting mothers to breastfeed, thereby improving breastfeeding rates. Children's centres therefore should work alongside health professionals to improve breastfeeding rates. Children's centres should liaise with health visitors and midwives to obtain and utilise accurate and appropriate local data on breastfeeding rates at initiation and 6–8 weeks. If the data provided from health is insufficient for children's centres to see their impact on improving breastfeeding rates, then children's centres should gather baseline and follow-up data on: I. Breastfeeding initiation and continuation with target and other mothers who register and engage with their children's centre II. Attendance rates on breastfeeding/peer-support groups.

	Children's centres should also ensure that they implement UNICEF's baby-friendly initiative[214].
What do others need to do?	Local authorities should work with health services and children's centres to gather and share baseline data on: I. New and pregnant mothers II. Rates of breastfeeding initiation and continuation within the wider community. They should also monitor whether early years settings in the area are implementing UNICEF's baby-friendly initiative[215].
Rationale	There are no specific measurement tools to monitor breastfeeding rates, and no single standard for measurement. The output and outcome indicators and time frames (initiation and continuation at 6–8 weeks) have therefore been selected based on current data collection methods (as part of vital signs monitoring), and data that is feasible for children's centres to collect (via parent self-report feedback). However, work is needed to validate and refine methods of measuring breastfeeding rates. We include total and partial breastfeeding in the indicators in acknowledgement that exclusive breastfeeding, although recommended and associated with the greatest health benefits, has low reported rates as it is difficult to achieve by many mothers. Breastfeeding is a learned activity and many newborns receive formula milk as a supplement until breastfeeding is fully established. Achieving an increase in 'any breastfeeding' in local areas will improve outcomes for children. There is evidence that measurement of breastfeeding at initiation

	and continuation (6–8 weeks and longer – ideally 3, 6 and 12 months), based on 24 hours recall, is the optimal method of providing a complete and accurate assessment of breastfeeding practice[216]. This is in line with UK developmental reviews conducted by health professionals[217]. Children's centres can work closely with health services to monitor breastfeeding continuation.
Existing administrative data, geography and timeliness	Breastfeeding data by locality (percentage of mothers breastfeeding at birth [initiation] and 6–8 weeks) has been collected via the Department of Health Vital Signs Monitoring return since 2004. Breastfeeding status at birth and at 6–8 weeks is routinely collected by health professionals shortly after birth and at the 6–8 week infant review. Breastfeeding is recorded as being initiated if infants receive any breast milk in the first 24 hours after birth. At 6–8 weeks, infants are classified into one of three categories: 'totally' 'partially' or 'not' breastfed. Total breastfeeding refers to exclusive breastfeeding, which is defined by the World Health Organisation as when the infant only receives breast milk without any additional food or drink, not even water. Partial breastfeeding is when infants are receiving breast milk but also formula milk or any other liquids or food. Partial and total breastfeeding rates are combined to give the outcome 'any breastfeeding', worked out using the following calculation and then converted into a percentage figure (x100): Numerator: Number of infants recorded as being totally breastfed at 6–8 weeks plus number of infants recorded as being partially breastfed at 6–8 weeks Denominator = Total number of infants due for 6–8 week check. The NICE clinical guidance 37 – postnatal care[218] – details indicators of successful feeding to inform observations of mother and child. The guidance also recommends that women's experiences with breastfeeding should be discussed at the checks.

	This data should be received by children's centres quarterly from the local authority through health visiting teams and midwifery to help them target support.
Data collection and analysis	Methods of data collection that involve querying breastfeeding practices retrospectively have been proven to have significant biases from inaccurate parental recall of earlier feeding practices. Furthermore, measurement of 'exclusive' breastfeeding continuation has found to be considerably less accurate than 'any' breastfeeding', owing to the above-mentioned inaccuracies associated with retrospective reporting and parental confusion around the definition of 'exclusive/total' breastfeeding. The method of data collection, including maternal report, direct observations, and health notes (and whether they are electronically submitted in a timely and accurate fashion), as well as whether collection occurs within 24 hours or retrospectively over a longer period, will impact on rates reported. For example, recent research has found that daily parental reporting shows promising accuracy. Validated measures for measuring breastfeeding rates, particularly for exclusive rates, would enable improved monitoring of breastfeeding prevalence. In the absence of validated measures, utilising mixed and multiple data collection methods is likely to help minimise data collection differences resulting from different data collection strategies.
Benchmark information	The most recent Infant Feeding Survey produced by the ONS[219] found that the initial breastfeeding rate in 2010 was highest in England at 83 per cent (compared with 74 per cent in Scotland, 71 per cent in Wales, and 64 per cent in Northern Ireland). Prevalence of exclusive breastfeeding was 23 per cent at a UK level. The most recent DH Statistical Release on breastfeeding rates at initiation and 6–8 weeks, 2012/13[220], found that in England the breastfeeding rate at initiation is 73.9 per cent and 47.2 per cent at 6–8 weeks. However, there are considerable local differences. For example, breastfeeding initiation varied from 59.3 per cent in the

	North East compared to 86.8 per cent in London[221]. Local differences in breastfeeding rates are likely to be partly attributed to the fact that breastfeeding rates have been found to differ for mothers from different backgrounds, with breastfeeding most common among mothers aged over 30, from minority ethnic groups, living in affluent areas and those with 18-plus education levels[222]. Children's centres will therefore need to consider their local demographics in order to target services and advice, develop baseline measures and compare outcomes with other areas with similar populations. The DH release includes a useful benchmarking tool for local authorities to help them develop baseline measures[223]. The NICE commissioning guide for peer-support programmes for women who breastfeed[224] states that, based on epidemiological data, national surveys, published research and expert opinion, the benchmark rate for breastfeeding women taking up the offer of peer support is estimated to be 85 per cent per year. However, there is wide variation in the initiation of breastfeeding and take up of peer support rates across the country. Local authorities can utilise the NICE commissioning and benchmarking tool for implementing peer-support programmes for breastfeeding women[225].
Key frameworks/ guidance that align with this outcome and measures	• 'Breastfeeding rates' is a key indicator for the maternity pathway of the new Public Health Outcomes Framework[226], with the overarching objectives of increasing healthy life expectancy and reducing inequalities in life expectancy and healthy life expectancy. • Breastfeeding is a key aspect of the Healthy Child Programme[227], which discusses how breastfeeding reduces the risk of excess weight and associated health problems later in life. Aims of the programme include increasing the proportion of mothers who breastfeed for 6–8 weeks or longer and to make breastfeeding the norm for parents. The

	associated guidance also recommends that children's centres could make use of experienced breast-feeders as volunteers, and could be a means of making antenatal and postnatal services more accessible to hard-to-reach groups. The programme also encourages the UNICEF's baby-friendly initiative[228] to be adopted by all community providers.
Limitations	The context in which data is collected can also result in data biases. Parents spoke to us during fieldwork about the pressure they feel to breastfeed, and how there is a social stigma around not being able to do so, which can result in added stress for those parents struggling to initiate and/or continue breastfeeding, thus leading to unreliable self-reporting: "There's a lot of pressure on parents to breastfeed. They feel guilty if they are unable to or stop as it is too difficult for them to continue." "Parents are regularly asked by different professionals whether they're breastfeeding, so they are quite used to the topic being brought up – although it's irritating being asked about it so often." Parents also told us that they need to feel supported to breastfeed and that professionals need to be patient with them in order for parents to not give up when experiencing difficulties. As mentioned above, there is no single standard for the measurement of breastfeeding rates. Currently, a variety of national and local surveys and returns, using different collection methods, are used to obtain estimates of breastfeeding rates. We also heard during fieldwork that breastfeeding data is difficult to obtain reliably in a timely manner from health services, although data collection improves in areas with established and strong links with health services. Furthermore, data provided from county councils (via health services) does not align with children centre catchment areas, so relevant catchment area data needs to be

	extracted in order to be applicable to the reach area of children's centres. Critically, breastfeeding data held by children's centre and health services is not currently cross-referenced, and there is no way of amalgamating health and children's centre data systems, so it is currently impossible to prevent duplication of data.

Outcomes	**11. More parents regularly talking to their child using a wide range of words and sentence structures, including songs, poems and rhymes.** **12. More parents are reading to their child every day.** **13. More parents are regularly engaging positively with their child.** **14. Improved parental responsiveness and secure parent–child attachment.** **15. More parents are setting and reinforcing boundaries.** **20. More parents are increasing their knowledge and application of good parenting.**
Indicators	• Percentage of parents regularly talking to their child using a wide range of words and sentence structures, including songs, poems and rhymes. • Percentage of parents reading to their child every day. • Percentage of parents regularly engaging positively with their child. • Percentage of parents demonstrating increased responsiveness and parent–child attachment. • Percentage of parents setting and reinforcing boundaries. • Percentage of parents increasing their knowledge and application of good parenting.
Selected measurement tools	**1.** The Early Home Learning Environment Index (EHLEI)[229] to measure outcomes 11 and 12 above (community-level measure). **2.** The Keys to Interactive Parenting Scale (KIPS)[230] to measure outcomes 13, 14, 15 and 20 (community-level measure).
What do children's centres need to do?	Children's centres should aim to measure the home learning environment (HLE) with all families who engage. These tools will

	enable the collection of comparative data for the HLE and positive, responsive parenting. Children's centres should utilise the EYFS Framework[231], and the supporting non-statutory guides: *Development Matters*[232] as well as the *Early Years Developmental Journal*[233], as means of engaging parents with their children's learning.
What do others need to do?	Early childhood services including health professionals, and particularly health visitors, can also use these tools to engage with families not yet using children's centres, in early years settings and in the HLE, to assess whether or not children are experiencing a stimulating HLE at the earliest possible opportunity (KIPS[234] is validated from two months). Partner agencies will need to work closely with children's centres to share data and track families.
Rationale	Hunt *et al* (2011) stated that there is a 'strong case for early years settings monitoring the early home learning environment more widely'[235]. We have selected the **Early Home Learning Environment Index (EHLEI)**[236] as it is the most widely used tool in the UK for measuring activities in the home learning environment. It has been evaluated as being the most robust quantitative measure of the home learning environment available[237], and has been proven to predict longer-term educational outcomes for children[238], as well as social and behavioural development[239]. The index was used in the Millennium Cohort Study (MCS)[240] and the National Evaluation of Sure Start (NESS)[241]. It has also been a key component of the Effective Provision of Pre-School Education Project (EPPE)[242], and other Government-commissioned research[243]. The EHLEI is also closely aligned with our outcomes framework, covering a number of our domains. In addition, compared to the other shortlisted measures for the home learning environment, the EHLEI is concise and more relevant for use within a wide variety of children's centres. (For example, the validated StimQ tool[244], although meeting many of our criteria for selection, goes into a great deal of

	detail about specific toys and resources, such as toy cash registers and life-size toy play areas, which will not be appropriate for all children's centres and all users.) However, further validation of the EHLEI is necessary. **The Keys to Interactive Parenting Scale (KIPS)**[245] received an 'A' rating for reliability and validity by the Californian Clearing House[246], and was recommended in the Wave Trust report[247] (the addendum to *Supporting Families in the Foundation Years*) as a tool to measure secure attachment with infants at 3–4 months. The tool is validated for use with children aged 2–71 months[248]. Although KIPS[249] can be used in the home environment, it was designed for family service providers to use in their daily settings with families and young children. The online training system is also cost-effective and would be convenient for busy staff. Relevant psychometric research has found that KIPS shows high inter-rater agreement and construct validity, and concludes that practitioners could reliably use the assessment to measure parenting[250]. Recent research[251] that compared KIPS mean scores found no significant difference by parent race/ethnicity. The results of the test-retest study[252] demonstrated high correlation of KIPS mean scores, and the criterion validity study[253] showed significant positive correlations of KIPS mean scores with the Nursing Child Assessment Teaching Scale (NCATS) and Home Observation for Measurement of the Environment (HOME). The HOME measure is considered the gold standard of home environment assessments, but is not deemed practical for universal assessments owing to the fact that assessment involves home visits. Unlike other measures of parenting (including the Parenting Scale – see below), KIPS is not based on a deficit model and relates to effective parenting, which means the tool is likely to be better received by parents and practitioners, and more closely aligns with our 'positive behaviour' outcomes framework.

	KIPS focuses on behaviours related to effective parenting, including: sensitivity of responses; involvement in the child's activities; engagement in language experiences; encouragement; limits and consequences; and the promotion of exploration and curiosity. Other measures have also been identified as valid and reliable, and do not incur additional charges. Local authorities may wish to utilise any one of these if preferred and/or currently implemented. However, the standardised use of one tool will enable comparability across centres and areas. The **Parenting Scale** (PS)[254] [255] is a measure of dysfunctional parental discipline practices, comprised of three factors: laxness (permissive, inconsistent discipline); over-reactivity (harsh, emotional, authoritarian discipline and irritability); and hostility (use of verbal and physical force). The measurement tool was selected as appropriate for our basket of measures as it is easy to administer, and has adequate reliability, internal consistency and validity[256] [257]. The tool has also been found to correlate with self-reported measures of child behaviour, marital discord and depressive symptoms, and with observational measures of dysfunctional discipline and child behaviour[258] [259].Furthermore, the Parenting Scale is also currently used within a number of local authorities as part of the Triple P and Incredible Years evaluation programmes. Children's centres could also utilise the UK-validated **Mothers' Object Relations Scale Short Form (MORS-SF)** for use with babies and the **MORS-Child** for use with children aged 2–4[260]. The scales were developed as screening tools to identify potential problems in the early mother–infant relationship, particularly in a mother's working model of attachment. The MORS-SF and MORS-Child scales have been identified as appropriate as they align with our specific outcomes (parental responsiveness and the quality of attachment). Furthermore, they have been deemed suitable and practical for

	universal use within children's centres because: they do not require the use of additional technology; they are quick and easy to administer and score, and; they are concise enough to be used in population surveys, as well as intervention evaluations. Furthermore, the scales have been validated as having high construct and criterion validity, item salience and internal consistency[261]. Children's centres can measure the self-efficacy of new parents to support outcome: 'more parents are increasing their knowledge and application of good parenting', using the **Karitane Parenting Confidence Scale**[262], which has received positive reviews from practitioners and managers, and has showed good internal consistency and test re-test reliability in evaluations[263]. The **Parent-Infant Interaction Observation Scale (PIIOS)**[264] is a brief screening tool that can be easily administered by primary care practitioners, trained in the assessment of parent-infant interaction[265], and as part of the Healthy Child Programme. The tool can be used with new parents to identify cases where sensitive responsiveness in parent-infant interactions is lacking and thus where additional support might be beneficial. Excellent internal consistency, and inter-rater and concurrent reliability have been reported[266].
Data collection and analysis	Using the **EHLEI:** Parents are asked to score themselves on the frequency of the seven activities (see Appendix) on a 0–7 scale (0= not occurring, 7 = very frequent), which is combined to form an aggregate score that ranges from 0 to 49, and normally distributed with a mean of 23.42 (SD = 7.71). Higher scores translate to a larger number of, and more frequent, home-learning activities. Children's centres should conduct 'baseline' interviews for 'universal' and 'at risk, targeted' groups (that is, those with reduced access to economic and social resources, and other targeted groups

	identified locally), who access and engage with the children's centre, and a 'follow-up' administration after a period of approximately six months. This will enable children's centres to monitor changes in the average (mean) EHLEI score for each group. Use of the **KIPS**: Use of the KIPS involves 20 minutes of observation and 10 minutes for scoring, and *ideally* the use of video recording so that the interaction can be scored at a later date. The 12 key parenting behaviours assessed are: 1. Sensitivity of responses 2. Supports emotions 3. Physical interaction 4. Involvement in child's activities 5. Openness to child's agenda 6. Engagement in language experiences 7. Reasonable expectations 8. Adapts strategies to child 9. Limits and consequences 10. Supportive directions 11. Encouragement 12. Promotes exploration and curiosity. Each item is set on a 5-point scale (5 indicating high quality), which include behavioural descriptors. Mean scores are calculated by summing the item ratings and dividing by the number of items scored. Behaviours marked as 'NOB' (*Not Observed*) should not be included in the calculations. The tool requires online training and annual re-certification, with personal training also available. *Use of the KIPS to measure attachment behaviour:*

	Because attachment behaviours start to develop at around 12 months of age, we recommend that KIPS is administered to mothers of children aged 12–24 months, in order to assess for risk of insecure attachment from the earliest possible opportunity. For further information, see the Appendix. Use of **supplementary qualitative measures**: Supplementary qualitative measures of the home learning environment, based on the recommendation by Hunt *et al* (2011), will also strengthen data outputs. Children's centres should attempt to collect and collate parent self-report output information on: • The extent to which parents demonstrate incorporating the seven key activities identified in the EHLEI into a wide range of activities within and outside the community, such as outings to the park and shopping trips. As well as proxy qualitative measures on: • The extent to which parents identify as decreasing the amount and frequency of activities they undertake with their child or children. • Additional information, where possible, on the home learning environment, such as parents' descriptions of what they did at home to support their children's learning (to help form case study data). Using the **Parenting Scale** Each item receives a 1–7 score, where 7 is the 'ineffective' end of the item. The ineffective response is sometimes on the left and at other times on the right. These items are reverse-scored (see below) so that 7 is always associated with the ineffective response. The higher the score, the more ineffective the parenting is. Whereabouts the parent fills in the circle indicates their likelihood

	of responding effectively or ineffectively. The following items have the ineffective response (scored 7) on the left side (the others on the right): 2, 3, 6, 9, 10, 13, 14, 17, 19, 20, 23, 26, 27, 30. These items are reverse-scored so that the ineffective response is always scored 7. To compute a factor score, children's centres will need to average the responses for the items on that factor. Laxness: 7, 8, 12, 15, 16, 19, 20, 21, 24, 26, 30 (11 items) Over reactivity: 3, 6, 9, 10, 14, 17, 18, 22, 25, 28 (10 items) (See the Appendix for a copy of the Parenting Scale tool.) Using the **Mothers' Object Relations Scales** parents should underline one of the choices for each of the questions. There are no 'right' or 'wrong' answers. 0= never, 1= rarely, 2= sometimes, 3= quite often, 4= very often, 5 = always. Scores for 'warmth' item numbers 1, 3, 4, 6, 8, 11, 13 should be added together to get an average score for 'warmth'. Scores for 'invasion' item numbers 2, 5, 7, 9, 10, 12, 14 should be added together to get an average score for 'invasion'. (See the tool in the Appendix for corresponding items.) Children's centres will be able to monitor changes in the average (mean) score for all users, including disadvantaged users. Using the **Karitane Parenting Confidence Scale (KPCS)** The KPCS is suitable for use with parents of infants aged 0–12 months. Each item on the scale is scored 0, 1, 2 or 3. There are no reverse-

	scored items and items have a common scoring order. Items marked 'not applicable' are scored 2. Scores are then summed to give a total score (range = 0–45). (See the Appendix for a copy of the tool.) Any items that a parent scores as 0 or 1, which indicates low confidence, should be discussed with the parent.
Benchmark information	In recent research[267] utilising the **KIPS**, mean scores were 3.25, with a standard deviation of .67 (number of participants = 130). In a US-based evaluation[268], lower quality parenting was classified as giving mean scores of less than 3.0, with higher quality parenting identified by mean scores equal to or above 4.0. In research that has utilised that **EHLEI**[269], the following mean and standard deviation scores for the HLE were determined: for children considered to be performing below expectation (mean = 26.44, *SD* = 7.26), for children considered to be performing at average level (mean = 23.61, *SD* = 7.45), and for children considered to be underachieving (mean = 21.62, *SD* = 7.83). A child was considered to be performing below expectation in numeracy and literacy, based on the British Ability Scales II, if the child's 'standardised residual'[270] was more than one standard deviation below the mean of zero, above expectation if the standardised residual was above one standard deviation from the mean, and as expected if their score was within one standard error of the mean. The clinical cut-off for the **KPCS** is 39 or less. Clients scoring 39 or less are indicating clinically significant low levels of parenting confidence. The change in scores necessary for the administrator to be certain that a parent has shifted in their level of confidence is 6 points.

Key frameworks/ guidance that align with this outcome and measures	• The Healthy Child Programme (HCP)[271] emphasises the importance of focusing on parenting and attachment. The guidance proposes that effective implementation of the HCP should lead to strong parent–child attachment and positive parenting, which will result in improved child social and emotional development. • The importance of early home learning and good parenting were identified as key priorities in the Tickell review[272] of the Early Years Foundation Stage. • The important role played by parents in taking an interest in their child's early learning, providing early learning materials and activities at home, and spending time helping their child to learn about letters and numbers is also recognised in the EYFS Profile Handbook[273]. The EYFS Framework[274] well as the EYFS Profile and associated non-statutory guidance *Development Matters*[275] and the Early Support *Early Years Developmental Journal*[276], have an important and influential role in engaging parents in home learning. • A report by the Children and Young People's Health Outcomes Forum[277] recommended that the Department of Health (DH) incorporate a new outcome measure into the Public Health Outcomes Framework: the proportion of parents where parent–child interaction promotes secure attachment in children aged 0–2. This recommendation was supported and built upon by the recent addendum to the Government's vision for the foundation years, *Supporting Families in the Foundation Years*[278], which recommended a number of additional measures of child engagement and attachment, including use of the KIPS to measure mother–baby interaction at 3-– months in addition to the health visitor assessment carried out at age 6 weeks.

Limitations	There is currently a shortage of standardised measures of the home learning environment and responsive parenting validated for use with young infants. There is also a lack of validation of these measures for use with general populations so baseline measures for children's centres are difficult to identify. The recommended tools measure the most crucial aspects of the home learning environment. However, when complementing these quantitative measures with qualitative data, children's centre staff need to be aware that parents have a much broader understanding of the home learning environment and are likely to self-report information that is not aligned with the outcomes framework. Although this is likely to be useful contextual information, reporting on everything linked to the HLE is likely to be time-consuming and will complicate the monitoring framework.

Outcomes	**16. More parents are experiencing lower levels of stress in their home and in their lives.** **17. More parents with good mental well-being.**
Indicators	• Percentage of parents experiencing lower levels of stress in their homes and in their lives. • Percentage of parents with good mental well-being.
Selected measurement tools	Screening tools for health professionals: **1.** General Health Questionnaire (GHQ-12)[279], The Patient-Health Questionnaire (PHQ-9)[280], or similar (screening tools). For children's centres: **1.** Satisfaction with Life Scale[281] and Positive and Negative Affect Scale[282] (community-level measures).

What do children's centres need to do?	Children's centres should aim to use the above scales with targeted parents and all parents, at registration and at regular intervals, to monitor improvements with families that engage with centres.
What do others need to do?	Failure to identify mental health issues during the antenatal and postnatal periods poses considerable risk to both women and their children. Evidence suggests that most mental disorders experienced during this period respond well to appropriate and timely early intervention. Professionals should continue to ask women at their first contact with services in both the antenatal and postnatal periods about past or present severe mental illness, previous treatment by a psychiatrist/specialist mental health team, as well as family history of perinatal mental illness. Health professionals should also consider consistently utilising one of the recommended self-report measures during the antenatal and postnatal periods as part of continual assessment and/or monitoring of maternal stress, anxiety and depression. This data should be made available to children's centres.

Rationale for measures	We highlight the crucial role that health services have to play in achieving and monitoring these essential outcomes, as during field visits it became apparent that parents are often anxious about discussing their mental well-being openly with children's centre staff through fear of reprisals (such as having their children removed from their care), or though fear of being judged as a bad mother, unable to balance work with raising a family: "Parents might not want to talk about what's happening at home, and about their stress levels. They might feel like there's going to be a black marker against their name if they admit difficulties."[283] The majority of children's centre managers and practitioners we spoke to also expressed concern about being expected to measure the mental health of new users. This was firstly because they did not always feel qualified to do so, secondly, because they were frightened of "opening a can of worms, with no services available to refer them to"[284], and finally, because they did not wish to frighten families away from using children's centres in the first place. Overall, children's centre staff felt that health services were best placed to routinely monitor the mental health of parents at baseline interview as they are a statutory service with broader access to the wider community. Health services also have more extensive and universal contact with pregnant and new mothers. Parents similarly acknowledged that they would expect to be asked more sensitive questions by health professionals than children's centre staff. The addendum[285] to the Government guidance *Supporting Families in the Foundation Years*[286] acknowledges that 'assessing and enquiring about intimate and personal details is a highly skilled activity', and therefore recommends that all community midwives and health visitors are trained in the Family Partnership Model[287] and promotional interviewing, so that 'all health professionals are well equipped to detect stress, anxiety and depression during pregnancy'[288].

We therefore recommend that health services consistently measure the mental well-being of mothers, starting from pregnancy.

Screening during the postnatal period:

Currently, healthcare professionals (including midwives, obstetricians, health visitors and GPs) are expected to make an assessment of maternal mental health at: a woman's first contact with primary care; her booking visit; and postnatally (at four to six weeks, and three to four months for more vulnerable families).

The **General Health Questionnaire (12 item version) (GHQ-12)**[289] has been evaluated as being a reliable and valid screening tool[290] [291]. The GHQ-12[292] is the most widely used measure of psychiatric ill-health in the UK (for example, it is one of the measures used to inform the Health Survey for England[293]), and has been found to be valid and useful in both clinical and general populations[294]. The questionnaire has also been evaluated as being quick and easy to use and has been found to effectively measure change over time[295].

The UK-validated **Patient Health Questionnaire (PHQ-9)**[296] is currently used in primary care. This tool has been found to be good in detecting depression in primary care populations, although it does not appear to have been validated for use with postnatal women[297]. Similar to the GHQ-12, it also has the advantage of there being a proportion of staff already accustomed and trained in its administration and scoring, as well as it being easy to administer and score.

A review of measures by Boyd *et al* (2005)[298] for use with women during the postnatal period also identified the **Hospital Anxiety and Depression Scale (HADS)**[299] as having good 'case finding' properties. However, as with the PHQ, it does not appear to have been validated in postnatal populations.

The **Edinburgh Postnatal Depression Scale (EPDS)**[300] was developed to

	assist health professionals to identify depression in the postnatal period. It is the most researched and widely used tool for use during this period. The EPDS has been evaluated as having moderate psychometric properties[301]. *Screening during the antenatal period:* There is considerably less validation work for measurement tools for use during the antenatal period compared with the postnatal period. As well as being widely used during the postnatal period, the **Edinburgh Postnatal Depression Scale**[302] has also been validated in pregnancy. However, further research is required to develop a more appropriate cut-off point to detect depression in pregnancy than that which currently exists for use during the postnatal period. Validation studies of the **Antenatal (APSI)**[303] and **Post-Delivery Perceived Stress Inventories (PDPSI)**[304] have found that the tools have good and excellent psychometric qualities, internal consistency and predictive validity, respectively. The PDPSI has been found to 'significantly predict' depression and anxiety six weeks postpartum, and is generalisable to populations. The tool also covers a number of other outcomes included in the outcomes framework, specifically breastfeeding, networks of support and parenting. However, the PDPSI has currently only been validated among French-speaking populations, so further work would be necessary to make the tool cross-culturally relevant (that is, translated into languages relevant for use within a UK context), and for a UK-validation study to be undertaken[305]. Health professionals within local authorities may wish to utilise any one of these if preferred and/or currently implemented. However, local standardised use of the one measurement tool would enable mental health and well-being to be compared across centres and areas, so further development and/or evaluations are required to determine which, if any, of the tools might be suitable to form the basis of a universal, routine assessment of mental health and well-being.

The role of children's centres

Children's centres, as trusted organisations, have a unique and crucial role to play in empowering parents and addressing some of the key underlying stressors and triggers of poor parental mental well-being that ultimately are within parents' control. To measure their contribution, children's centres should consider utilising simple measures of subjective well-being. These measures were identified in the recent OECD publications *How's Life? Measuring Well-Being*[306] and *Guidelines on Measuring Subjective Well-being*[307], as the most valid means of monitoring users' overall well-being and changes in well-being. The research suggests there are three main components of subjective well-being: life satisfaction (a measure of how people evaluate their life as a whole, and formerly known as the 'Self-Anchoring Striving Scale' or 'Cantril Ladder'[308]), positive affect and negative affect (a person's feelings or emotional state at a particular point in time)[309].

Subjective measures of 'life satisfaction' and 'affect balance' have been selected as the best measures as people are the best judges of how their own lives are going. There is also extensive evidence that people find it easy to respond to questions on subjective well-being[310]. Research has reported lower non-response rates and found that people generally give similar answers to questions if they are repeated at different times[311]. Furthermore, studies have shown that subjective well-being questions are understood in a similar way across cultures[312].

Subjective measures of well-being have been tested against a range of indirect measures of well-being and generally show the anticipated relationship: for example, self-ratings of well-being tend to correspond with levels of the stress hormone cortisol, which is produced by individuals as a response to stress[313]. (Furthermore, obtaining self-ratings is an easier and less intrusive method for children's centres to

	adopt than obtaining stress hormone samples from users.) There is also reliable evidence that subjective well-being predicts behaviour such as suicide and sociability, in a meaningful way[314]. The Cantril Ladder has been evaluated as 'represent[ing] the best available scale for overall life satisfaction'[315]. The Satisfaction with Life Scale is one of the best tested and most reliable multi-item scales of life evaluation and has a higher reliability than single item measures[316]. The Positive and Negative Affect Scales are shown to be 'highly internally consistent, largely uncorrelated, and stable at appropriate levels over a 2-month time period'[317]. Measures of subjective well-being have been used in the World Values Survey[318], the European Social Survey[319], the German Socio-Economic Panel[320], the British Household Panel Study[321], the Canadian General Social Survey[322], the Gallup World Poll[323], the European Social Survey[324], and recently by the National Institute of Statistics and Economic Studies (INSEE) and the Office for National Statistics (ONS), as part of their measures of national well-being[325].
Data collection and analysis	It is important that children's centre staff and managers receive training in the identification of maternal stress and mental ill-health, which is likely to increase their confidence in working with families to identify and address, where possible, underlying stressors. Local authorities will also need to ensure that there is sufficient provision to which children's centres can refer families if and where need is identified. Items on the **GHQ-12** have a four-point scoring system that ranges from a 'better/healthier than normal' (0 score) option, through a 'same as usual' (0 score), a 'worse/more than usual' (1 score) to a 'much worse/more than usual' (1 score) option. Missing data should be scored as low scores (0). The **Satisfaction With Life Scale**[326] is calculated as the sum of responses to each of the questions. This gives a score of 5–35. Data collected on

	life satisfaction can be presented as the mean value of the responses, excluding missing data, and can be used to describe and compare responses between different populations. The standard deviation can also be used to present, analyse and compare data. A score of 20 represents the neutral point on the scale. The following mean scores are described as[327]: 5–9: Extremely dissatisfied 10–14: Dissatisfied 15–19: Slightly dissatisfied 20: Neither satisfied nor dissatisfied 21–25: Slightly satisfied 26–30: Satisfied 31–35 Extremely satisfied. Using the **Positive and Affect Balance Scale**[328], individuals are asked to report on feelings of positive or negative emotions experienced during the previous day. The proportion of individuals who report having experienced more positive than negative emotions is used to evidence this indicator. Results for affect balance data can be presented either separately for each of the above questions in the list, or as a composite measure. Data can be presented as the mean value of the responses, excluding missing data, and can be used to describe and compare responses between different populations. Standard deviation and the inter-quartile ranges of responses can also be used to present, analyse and compare data. For further information, please see the attached tools in the Appendix. For further information on subjective well-being, see the OECD's Guidelines on Measuring Subjective Well-Being[329].

Key frameworks/ guidance that align with this outcome and measures	• A focus on improving parenting has started to infiltrate public policy and practice, further to the publication of the Department of Health's Healthy Child Programme (HCP)[330]. The HCP instructs for a 'full health and social care assessment of needs, risk and choices by 12 weeks of pregnancy by a midwife or maternity healthcare professional', identifying a range of risk factors, including parents with mental health problems, unstable partner relationships, domestic abuse and stress in pregnancy[331]. An increase in the number of health visitors should help to improve the identification rate of new mothers with postnatal depression and high levels of stress. • The Core Purpose for Children's Centres[332] states that the health and well-being of parents should be within the remit of centres. • NICE public health guidance on social and emotional well-being[333] recommends that health professionals in antenatal and postnatal services should aim to identify factors that could negatively affect children's social and emotional well-being, through discussions with parents about their mental health, substance or alcohol misuse, family relationships or circumstances, as well as networks of support. The guidance also recommends that early-years practitioners, including children's centres and linked services, should identify factors that may pose a risk to a child's social and emotional well-being, as part of an ongoing assessment of their development. • *No Health Without Mental Health,* the Mental Health Strategy for England[334], supports the prioritisation of mental well-being and early intervention across all ages.
Limitations	A review looking at antenatal prediction of depression in the postnatal period concluded that no screening instruments reviewed had 'sufficient sensitivity or positive predictive value to form the basis of a routine screening programme'. Indeed, the Whooley questions

	recommended in clinical guidance issued by NICE in 2007 have so far only currently been validated in older populations. Therefore, before a tool can confidently be recommended to support routine assessment, further work is required to develop and/or validate a reliable predictive measurement tool for routine clinical assessment, particularly for tools in the antenatal period, although additional validation work is also required for the postnatal period.

Outcome	**18. More parents have greater levels of support from friends and/or family.**
Indicator	• Percentage of parents with greater perceived levels of support from friends and/or family.
Selected measures	Multi-dimensional Scale of Perceived Social Support (MSPSS)[335].
What should children's centres do?	Children's centres are ideally placed to speak to parents about their social support networks. Centres can be a useful foundation for more insular families. For example, one parent we spoke to during the research talked of how staff at the centre acted as initial sources of support, helping her to build her confidence and make links to other local families with young children: "I have made so many friends from coming to the children centre, other mums and staff – the children's centre has meant everything to me and helped me through so much." Children's centres should gather baseline information by asking the 'our relationships' questions of all families who engage with a centre, and then collect follow-up data at regular intervals.
What should others do?	Early childhood services should work closely to identify need, and refer and share information where necessary.
Rationale	Many identified validated tools were found to measure aspects of social support, such as community-based social support, partner support[336], tangible (instrumental) support – that is, the provision of financial assistance or services – *or* quantitative measures of social support, such as the number of friends people have to turn to

	when they need additional support. However, perceived social support is thought to be a better predictor of wellbeing than objective measures[337]. The multidimensional scale of perceived support (MSPSS)[338] is a subjective assessment of three distinct forms of social support: family, friends and significant others. The scale has been evaluated as having good internal and test-retest reliability across a number of subject groups, including pregnant women, adolescents and paediatric residents, as well as moderate construct validity[339]. The tool is also brief and simple to use. Although the MSPSS is the most widely used tool to measure social support, and most closely aligns with the outcomes framework, there are a number of limitations. For example, although the different sources of support within the MSPSS have been found to have strong validity, parents might perceive others not included in the scale as important sources of support[340], such as psychotherapists or practitioners. An evaluation also advised caution when 'comparing perceived sources of support for women and men on the MSPSS *subscale* mean scores', and for further evaluations with varied clinical samples[341]. Despite these caveats, the 'total score' on the MSPSS has been described in the literature as a 'useful measure of overall functioning and well-being' and the 'relative ease of administering and scoring this measure makes it a good choice for research applications, and might have potential utility in some clinical settings'[342]. Through work with parents, children's centres may be made aware of existing or emerging difficulties with the parents' couple relationship. For this purpose, the Tavistock Centre for Couple Relationships (TCCR) recommends a number of well-validated tools to specifically assess the parent partnership. As previously discussed in the report, the parental relationship quality is a crucial

	aspect of parental support and plays a role in aspects of child development[343]. **The Relationship Attribution Measure (RAM)[344]** specifically considers the level and quality of support from the co-parent, whereas the **Systemic Clinical Outcome and Routine Evalution-15[345]** questionnaire considers how the parent perceives the quality of the family relationship. **The Work and Social Adjustment Scale[346]** assesses a wider range of 'stresses' alongside the parents' close relationships (family and friends) to see how stresses affect their ability to do day-to-day tasks.
Data collection and analysis	The MSPSS includes 12 items and has a 7 point rating scale ranging from very strongly disagree (1) to very strongly agree (7). A composite score for all 3 subscales should be calculated and presented as the mean value of the responses, excluding missing data, and can be used to describe and compare responses between different populations.
Key frameworks/ guidance that align with this outcome and measures	• Ofsted inspectors, when making their judgements of children's centres, must consider the ways in which the centre helps parents to develop formal and informal networks of support. • The guidance *Supporting Families in the Foundation Years* highlighted the significant role that health and community services play in helping families with young children to build their social support networks.

Outcome	**19. More parents are improving their basic skills, particularly in literacy and numeracy**
Indicator	• Percentage of children centre users with low-level qualifications achieving entry, foundation and intermediate level numeracy and literacy qualifications (community-level measure).
Indicator descriptors	Using the qualification coding framework employed by Gutman and Feinstein's study on children's well-being in primary school (2008)[347], children's centres can establish the proportion of users classified as holding 'lower qualifications' – up to GCSEs/O-Levels, including no qualifications, Certificate of Secondary Education – and technical qualifications including shorthand typing, and other skills, for example, hairdressing or apprenticeships. There is no official list of how UK grades or tariff points compare with other countries. However, UCAS (the Universities and Colleges Admissions Service) has published a useful comparative guide[348]. A number of organisations also provide information on how qualifications compare[349]. Children's centre staff may wish to explore with families that hold qualifications from overseas whether they may benefit from attending literacy and numeracy courses. Research[350] bases 'good basic skills' on scores achieved on literacy and numeracy tests, such as the questions from Skills for Life[351] and Parsons and Bynner (2005) [352]. The Moser Report (DFEE 1999)[353] identified Level 1 literacy and Entry Level 3 numeracy as the standards necessary for adults to function at work and within society. The UK's classification of

	literacy and numeracy skills is broadly as follows: Entry Level is the expected level of a 7-year-old, Foundation Level 1 is the level expected of an 11-year-old (NVQ Level 1), and Intermediate Level 2 is equivalent to GCSEs graded A*–C[354]. In 2000, the Qualifications and Curriculum Authority, Department for Education and Skills and the Basic Skills Agency published the first national standards for adult literacy and numeracy[355]. The aim of the adult literacy standard is to specify the full range of skills needed for an adult to be able to communicate, and confidently apply numeracy, effectively and efficiently. Numerator = Number of families accessing children's centre or linked services with low-level qualifications achieving entry, foundation and intermediate level numeracy and literacy qualifications. Denominator = Total number of families accessing children's centre or linked services with self-reported low-level qualifications or expressed interest in accessing basic skills courses (multiplied by 100).
What do children's centres need to do?	Children's centres should collect data on the highest qualification levels of all parent users at registration (parent self-report). Children's centre staff should also monitor attendance at and completion rates of adult learning courses for those targeted parents identified as likely to benefit from courses to improve their basic skills (parent self-report).
What do others need to do?	Adult learning providers should work closely with children's centres to refer, share data and track families' journeys and achievements. Records of adult basic skills course completion should be provided by adult learning providers to the local authority.
Rationale	We had a clear steer from children's centre managers, staff and users that subjecting all new parents to numeracy and literacy tests on entrance would be impractical and unwelcome, potentially deterring many families from engaging with the centres. Therefore, instead we propose that children's centres gather baseline information on parents'

	highest qualification level. This is because evidence suggests that for parents with lower qualification levels (up to GCSEs/NVQ2s), having good basic skills in numeracy, and particularly in literacy, is strongly associated with improved child outcomes[356]; an increase in earnings and increased confidence in applying for jobs[357], and; increased motivation to look for work[358]. On the other hand, for more educated parents, basic skills in literacy and numeracy do not appear to be as important a determinant of child cognitive outcomes[359]. This indicator will therefore enable children's centres to identify which targeted families may benefit from additional support to improve their basic skills.
Existing administrative data and geography	• Skills for Life Survey (2011), local area estimates data available from: www.gov.uk/government/statistical-data-sets/2011-skills-for-life-survey-small-area-estimation-data • ONS - 'highest level of qualification' (Census data)
Data collection and analysis	Obtaining this baseline information from all users will enable children's centres to establish the proportion of users that fall under each of the classifications above. Based on the research findings above, children's centres can then identify those families classified as having 'low qualifications' (classifications 0–2) and can work with each family on a one-to-one basis (potentially utilising soft outcome measurement tools to identify goals and monitor changes in attitudes, behaviours and confidence), to determine how best they can support them (for example, through in-house or external basic skills provision, or providing access to adult further education courses). However, it is important to note that there is significant variation in the basic skills levels of parents with no or low-level education. This suggests that it will therefore be necessary for children's centres to evaluate the impact of adults' basic skills conditional on educational level, as not all parents with no or low-level education will require additional support with their basic skills, but could be supported to

	advance their highest qualification level.
Benchmark information	As part of the Skills for Life Survey (2011)[360], local-area-level estimates are available of the number and proportion of adults (aged 16–64 years old) in England living in households with defined skill levels in literacy and numeracy, as well as ICT, and the number and proportion of adults in households who do not speak English as a first language. Local authorities can examine this estimated data to help develop local baselines. The Skills for Life Survey[361] indicated that across England, one in six adults has some difficulty with aspects of reading and writing and one in four struggles with maths.
Key frameworks/ guidance that align with this outcome and measures	• As part of Ofsted inspections[362], children's centres are required to evidence effective partnerships with adult training services, and the quality and impact of services in improving outcomes, or sustaining already very good outcomes, for families, in terms of providing opportunities for target adults to participate in activities that improve their personal skills, education and employability. • Reducing child poverty and supporting families' economic well-being is stated as a priority for local authorities, commissioners and leaders of children's centres in the *Sure Start Children's Centres Statutory Guidance* (2013)[363], which discusses how adult learning to improve basic skills has been shown to help prepare adults for a return to work. • In November 2012, the Department for Business, Innovation and

	Skills, as part of the Government's economic policy objective and in line with the Budget Plan, *Plan for Growth*[364] announced a doubling of funding for English and Maths functional skills qualifications[365]. For adults, the Government has also introduced free maths and English GCSEs and is continuing to fund basic English and Maths courses, while other qualifications are available to support those with lower skill levels.

Outcome	**For outcome 20, see page (TBC)**

Outcome	**21. More parents are accessing good work or developing the skills needed for employment, particularly those furthest away from the labour market.**
Indicators	• Percentage of parents from households where someone is in work (community and population-level measure). • Percentage of families identified as willing/able to work in receipt of Jobseeker's Allowance and low income benefits (community-level measure). • Percentage with increased 'satisfaction with allocation of time' (community-level measure). • Percentage of families attending and completing 'work readiness' and learning skills programmes (community-level measure). • Percentage of disadvantaged and other families accessing high quality early education (community and population-level measure).
Indicator descriptors	Increased percentage to evidence positive impact: Numerator = Number of (targeted and other) families with labour market involvement engaging with children's centre.

	Denominator = Total number of (targeted and other) families engaging with children's centre (multiplied by 100). Reduced percentage to evidence positive impact: Numerator = Number of families engaging with children's centres and linked services identified as willing/able to work in receipt of Jobseeker's Allowance and low-income benefits. Denominator = Total number of families engaging with children's centres in receipt of Jobseeker's Allowance and low-income benefits (multiplied by 100). Increased percentage point change in 'satisfaction with allocation of time' for targeted and others families to evidence positive impact. 'Satisfaction with allocation of time' indicator: 'could you tell me if you think you spend too much, too little, or just about the right amount of time in four areas: your job/paid work; contact with family members living in your household or elsewhere, and; other social contact (not family)?' Results from the 'satisfaction with allocation of time' indicator are shown as a percentage of families replying "just the right amount of time" in various areas. Children's centres can measure success in contributing to parents' accessing good quality work and thus improving their work–life balance by comparing baseline and 'after' percentage point changes at regular intervals. Percentage of families to evidence positive impact: Numerator = Number of families engaging with children's centres and linked services who are attending and completing 'work readiness' and learning skills programmes. Denominator = Total number of families engaging with children's centres who are able to work with no labour market involvement and/or in receipt of Jobseeker's Allowance and low income benefits (multiplied by 100). Increased percentage of families to evidence positive impact:

	Numerator = Number of families, disadvantaged and other families, accessing high quality early education. Denominator = Total number of families, disadvantaged and other, in local authority area.
What do children's centres need to do?	Children's centres should regularly collect evaluation data on employment statistics, benefit claimants, work-related well-being and employability from targeted and other families engaging with children's centres. Children's centres should also capture data on their efforts to either provide high quality childcare directly or support parents to access such provision elsewhere, and on the volunteering and training opportunities they offer parents either within the centre or through partners in the wider community.

What do others need to do?	DWP should consistently and accurately share relevant data to help children's centres identify and engage with families who are likely to benefit from engaging with children's centres. Local authorities should provide data to children's centres on benefit and Jobseeker's Allowance claimants within the wider community, as well as data on children using funded childcare provision (from the Early Years and Schools Census). The quality of early education and care settings are most commonly assessed through Ofsted inspection reports, the Environment Rating Scales (ERS) and Quality Assurances Schemes used by local authorities and early childhood providers. A report by the University of Oxford, the Daycare Trust and A+ Education Ltd[366] examining how to improve quality in the early years, concluded that no single measure reflected all aspects of quality. A broad range of tools therefore should be used and administered over time. However, research studies have found the ERS tools to be associated with children's outcomes, whereas Ofsted scores for early years settings did not predict children's later life outcomes[367]. The report by Matheas et al (2012)[368], therefore recommended that local authorities need to be supported by central government, and providers need to be supported by local authorities and provider representative bodies, in using a broad range of quality measures to assess the quality of settings.
Rationale	The percentage of Families/households in work and in receipt of income-related benefits is a proxy for the conditions of work as it indicates that any employment accessed fails to pay an adequate family living wage and/or provides insufficient working hours. The quantitative indicator measuring whether or not more families engaging with children's centres self-identify as being willing and able to work will enable children's centres to evidence 'distance travelled' by families, particularly during the current economic climate in which jobs

	are harder to come by, and employers are increasingly risk-averse, offering more part-time, short-term and zero-hour contracts. Other factors beyond the control of children's centres and linked services, such as a lack of good working opportunities in the area, can also affect the achievement of the long-term goal of families obtaining and sustaining 'good work'. There are no validated tools that measure employability as a whole (soft employability skills and attributes – personal, social and transferable skills relevant to all jobs and that represent stepping stones towards obtaining and retaining good work, as opposed to technical skills and qualifications). A number of reviews[369] indicate that no set of indicators for the measurement of soft outcomes linked to 'employability skills' can be 'fit for purpose' across all learning aims and populations. The National Statistics Socioeconomic Classification (NC-SEC)[370] is a validated measure of employment relations and conditions of employment. However, we believe this measure to be too detailed for children's centres; nor does it incorporate a consideration of work–life balance. The OECD well-being study[371] compared a number of indicators to measure work–life balance and identified the 'long working hours' indicator as the most appropriate. However, we have determined this indicator to be less appropriate for our purposes as long working hours are likely to impact only a very small proportion of families using children's centres. For other users, additional work-related issues such as work stress, lack of flexible working hours or anti-social working hours may be the main cause of work-related stress. We therefore recommend the use of the 'satisfaction with allocation of time' indicator included in the OECD review of measures of work–life balance[372]. The indicator is broader in its remit and is more likely to be relevant for more users of children's centres. This indicator is based on the European Quality of Life Survey[373].

	We include a measure of access to high quality early learning provision as the availability of available childcare (or lack of it) is a practical issue that could facilitate/prevent families from accessing good work, developing appropriate skills or engaging with children's centres altogether. Research has also found that high quality provision is particularly important for children from disadvantaged backgrounds, helping to lessen the effects of social disadvantage[374].
Existing administrative data and geography	DWP-administered benefits and Jobseeker's Allowance claimant statistics are available quarterly at SOA level[375]. The local child poverty measure, calculated by HMRC, is defined as 'the proportion of children living in families in receipt of out-of-work benefits or tax credit claims where their reported income is less than 60 per cent of median income', which covers approximately 98 per cent of children. The data is available as a snapshot at 31 August, at local authority, unitary authority and county level, and for children aged 0–15 years. The national indicator 'percentage of eligible families benefitting from the childcare element of Working Tax Credits' is available for families with children aged 0–14 years and available at SOA level. ChiMat Child Health Profile data includes an indicator of 'children living in poverty' (aged under 16 years), as well as 'rate of family homelessness' (homeless households with dependent children or pregnant women per 1,000 households)[376]. Data on the number of applicant households with dependent children or a pregnant woman, accepted as unintentionally homeless and eligible for assistance, is available at local authority level, for each financial year, from the Housing Strategy Statistical Appendix, Department for Communities and Local Government[377]. 'Provision for children under 5 years of age in England' is a national statistic that enables local authorities and counties to monitor the

	number of 3- and 4-year-olds benefitting from some early years education. Data is published annually[378]. Data on take-up of early years education at age three or four is extracted from the Early Years Census and concurrent Schools Census elements of the DfE's National Pupil Database. Both sources collect data on children using funded childcare provision during each academic year, and can be used to look at take-up of early education prior to starting school.
Data collection and analysis	A decreased proportion of families with young children in the wider community in receipt of income-related benefits will evidence positive impact as a result of a joint employment strategy within the local authority area. Children's centres and linked services should collect baseline information on the number of families engaging with their centres that are in receipt of Jobseeker's Allowance and low income benefits, and regularly monitor this data in case circumstances change for families. For those families identified as being in receipt of Jobseeker's Allowance and income-related benefits, children's centre staff and linked services should aim to establish if any or all of the household family members are willing and able to work, and regularly monitor this data to check for changed circumstances. This is because a family in secure and good quality work when first engaging with a children's centre can see their work circumstances change abruptly, which might impact on their ability to provide a safe, healthy and stimulating home learning environment. By measuring and monitoring the outcome above, children's centres and linked services will be able to identify those families that might benefit from targeted support to become 'work ready', with employability skills provision provided in-house or externally. (Children's centres will need to indicate whether 'work readiness' and/or learning skills courses are provided in-house, or whether they have partnership agreements in place with external providers and sign-post families across.) To support the quantitative measures, children's

	centres will need to further explore the reasons behind families not accessing good work and/or being in receipt of benefits in order to appropriately support families to access good work. For example, some mothers may self-report no current labour market involvement as they have recently had or have babies or young children for whom they are the primary carer, or because they or their partner have a disability that prevents them accessing employment. We therefore recommend that the above quantitative indicators be complemented with the qualitative information (based on parent self-report feedback), to enable children's centres to explore and understand in more depth the context of families' lives. This information should include the reasons why families are able to access good or damaging work and their reasons, if any, for not accessing good work and/or claiming incapacity benefits, and should look at: – Job satisfaction – Personal and household circumstances that impact on employment (including reasons for claiming incapacity benefits, and, if the family/household is not currently involved in the labour market, what was the last main job of any family/household member who has worked and when were they last employed in that job). Throughout our research, we received positive feedback about the Family-CAF tool from a number of children's centres we spoke to. The f-CAF is starting to be introduced more widely across the country. Through use of the Generic Assessment of Parents/Carers section of the f-CAF, children's centres and linked services will be able to capture supporting qualitative data about parents' access to economic and social resources, using a standardised approach, which will facilitate comparison across and between local authorities, and minimise the data challenge associated with families utilising a number of different children's centres across the locality. The f-CAF tool can help children's centres and linked services to identify families with depleted access to social resources, and where multiple and/or acute risk factors (such as parental criminality, substance dependency and domestic violence) are

	present. This will help children's centres and linked services identify families who are likely to benefit from additional support to help them provide a safe, healthy and stimulating home environment for their child or children. Although the long-term outcome is an increase in the number of families with labour market involvement and experiencing good work–life balance, measures of soft employability skills and attributes such as self-esteem, communication skills and problem-solving, using quantitative and qualitative indicators, are important for demonstrating 'distance travelled' by children's centre users and are often precursors to successful, good quality employment. See the National Children's Bureau's *Measuring Employability Skills* report[379] for further information and a comprehensive list of soft employability skills and attributes. The 2013 Children's Centre APPG report[380] states that: 'for the most disadvantaged families using children's centres, the journey back into the labour market or into work for the first time may be a long one. This may need to begin with confidence building, basic skills training, work experience or volunteering and ESOL. Children's centres can encourage parents to begin the journey without parents feeling the imminent pressure to move into paid employment.'
Benchmark information	Community profiles differ from area to area, as do available data and data sources on local populations. Children's centres and local authorities should therefore agree standardised baseline and target employment and benefit claimant rates, based on existing administrative data for the local area, Joint Strategic Needs Assessments (JSNAs) and local population data. Up-to-date national baselines are available from the Office for National Statistics (Labour Market and Claimant Count statistics; geographical coverage: UK)[381].

Key frameworks/ guidance that align with this outcome and measures	• *Supporting Families in the Foundation Years* (2011)[382] draws attention to the strong link between reducing child poverty and parental employment. Children's centres can help families to access a range of work-focused services in their community, including benefits advice, adult and community learning, careers advice, volunteering opportunities, and employment support. • *The Sure Start Children's Centres Statutory Guidance* (2013)[383] states that reducing child poverty and supporting families' economic well-being should be a priority for local authorities, commissioners and leaders of children's centres. Children's centres are required to forge strong links with Jobcentre Plus. • The DWP's 2011 report *Work-focused services in children's centres*[384] recommended that 'children's centre staff and managers need to have child poverty at the forefront of their thinking and understand that employment can provide a route out of it'. The report also recommended that Jobcentre Plus services are well positioned to deliver work-focused services in children's centres. • Demonstrating efficient partnerships with employment services features within the Ofsted inspection framework[385]. Children's centres are also expected to demonstrate the effectiveness of work to provide opportunities for targeted adults to participate in activities that improve their personal skills, education and employability, including volunteering opportunities. • As part of the Troubled Families programme[386], the Government has pledged to work with local authorities to 'put adults on a path back to work'. • The Children's Centre All-Party Parliamentary Group report (2013)[387] highlighted the 'significant role' that children's centres can play in supporting families on the lowest incomes, through

	linking parents to employment opportunities and support, and providing training and volunteering opportunities.
Limitations	Measuring work–life balance is challenging as the cut-off points for 'too much' and 'too little' will be different depending on the individual's job satisfaction, and personal and household circumstances. Quantitative measures of employment and work–life balance do not allow for an understanding of whether individuals are free to choose how they spend their time or whether they enjoy their leisure activities, and thus whether such time translates into feelings of stress or well-being. They also tend to be one-off in nature: many jobs occasionally involve periods of high demand and stress, and longer hours. A parent asked to report on their work–life balance during such a period is likely to provide a different perspective than if asked during a quieter period.

Practical use

The need for an approach based on proportionate universalism

The core purpose of children's centres, as set out in the Statutory Framework for Children's Centres[388], reflects the fact that there are children from all socioeconomic backgrounds – from disadvantaged to privileged – who are not reaching their full potential. However, there is a 'socioeconomic gradient' in health: health outcomes improve as a person's economic, social and work status increases. To reduce the steepness of this socio-economic gradient in health, interventions must be universal, but with a scale and an intensity that is proportionate to the level of disadvantage. We call this proportionate universalism. Greater intensity of action is likely to be needed for those with greater social and economic disadvantage – in other words, those families who are in most need of intervention and support, or who may be unlikely or unwilling to access such help. However, focusing solely on the most disadvantaged will not reduce

the health gradient. It will only tackle a small part of the problem. We therefore urge an approach based on proportionate universalism, supporting all families to thrive.

The need for a whole-system approach

To achieve positive outcomes for all children, particularly during this difficult economic climate, there needs to be a whole-system approach. Local authorities, health and well-being boards, and their local partners, with strong leadership across all agencies and levels, need to take a more holistic and preventative approach to working with babies, children and families – pooling budgets, resources and expertise.

As organisations that build a trusting relationship with families and engage with parents on a full range of issues[389], children's centres are ideally placed to be at the heart of local area activity working to improve outcomes for children and families. It is vitally important to ensure collaboration between children's centres, local health services, particularly midwifery care and health visitors, as well as with wider partners such as Jobcentre Plus, housing, adult learning and other early childhood services, including those offered by the voluntary sector. Consistent, collaborative partnerships to achieve and monitor the essential outcomes will improve the health and development of children in the local area.

Information and work to support the outcomes framework

To support this outcomes evaluation framework, practitioners should strive to collect supplementary information for all users as part of the registration data collection process. The following data can be used alongside the measures included in this guidance to report on changes for different sub-groups:

- Demographic information – age, gender, relationship status, number of children, ethnicity, household size
- Material conditions – household income, employment status and housing quality
- Quality of life – health status, disability, healthy diet and lifestyles.

As a result of the Localism Act 2011, local authority early years and adult services commissioners also have the opportunity to address and improve some of the broader, societal and structural factors that predict family connectedness, such as access to:

green spaces; book and toy libraries; resourced children's centres; adult learning opportunities; and the retailing landscape of high streets. These factors interrelate with and influence the essential outcomes. A joint strategic action and measurement plan that spans different levels (individual, family, neighbourhood, community and socio-political context) therefore has the potential to make a very real and sizeable difference to the lives of children and families within local authority areas.

Choosing which of the outcomes to focus on

The drivers of children's health and development are complex and interrelated: all of the essential outcomes are thus complementary, like pieces of a jigsaw, gathering validity and meaning when pieced together to produce a bigger picture. Work to address and measure any one of the essential outcomes is likely to benefit a number of children and families. Indeed, some of the key drivers – such as maternal education, a stimulating home learning environment and breastfeeding – buffer against other negative experiences or exposures, and have a comparatively larger influence on child health and development than some of the other outcomes (for further information see *An Equal Start*). However, by focusing on only a selected number of the essential outcomes, the effects will be limited: it will neither enable improvements on a large scale, nor narrow the health and development gap within local areas.

Depending on local need, children's centres can choose to focus on a particular number of the essential outcomes – for example, in areas with disproportionately high levels of postnatal depression, improving health and well-being and reducing stress are likely to require additional resources and focus. However, such targeted work ideally needs to occur within the context of a wider-reaching approach that addresses *all* of the essential outcomes.

The importance of using the measures consistently

Children's centres and local authorities should strive to use the measures included in this guidance consistently across all of the children's centres in the area, in order to facilitate benchmarking and comparisons. Altering the way a measurement tool reads – for example, by changing the wording, omitting or altering the sequence of questions – will affect the tool's validity. It is also crucial that children's centre staff are confident in

data collection and handling, and developmental training will be necessary where this is lacking.

Children's centres should refrain from attempting too much and 'muddying the water'. The aim of this guidance is to help children's centres to focus resources on measuring – to a high standard – what matters the most in terms of outcomes for children and families.

Evidencing distance travelled

As previously discussed, outcomes can take some time to evidence since they are often linked to long-term objectives. Indeed a number of the outcomes within the outcomes framework are dependent on children's centres demonstrating improvements over time. It is therefore sometimes necessary for children's centres to achieve a number of output and interim (short-term) outcome indicators as stepping stones before having the opportunity to achieve longer-term outcomes. Where appropriate, these have been included within the tables of this document.

It became clear throughout the research that children's centres staff are keen to incorporate some of their innovative practice undertaken as part of 'preparatory' work with parents into their evaluation frameworks. There is ample scope for children's centres and linked services to continue to incorporate and develop innovative practice to help users on their journey towards improved outcomes. These inputs, outputs, short-term outcomes and innovative practices can be measured and thus demonstrated in a number of ways:

- Using existing data, such as registration documents, activity records, participation and attrition rates, as well as local area-level data
- Using quantitative methods, including surveys, questionnaires, measurement scales, and feedback forms
- Using qualitative methods that typically capture 'soft data' – outcomes that are not easily defined or assessed – but that can provide useful evidence of the ways in which children's centres are working towards achieving longer-term outcomes. People's opinions and views on the perceived value of services, as well as any changes of behaviour, can be recorded and monitored through the

use of case files, questionnaires, learning journeys, interviews and focus groups, informal conversations and feedback forms.

Children's centres need to use standardised, quantitative measures to be able to demonstrate progress towards the essential outcomes effectively. However, we, and practitioners, are well aware that quantitative indicators can never truly capture the complexity of work done within centres, such as raising parents' aspirations for both themselves and their children, nor the context of people's everyday lives. Combining 'hard' quantitative and 'soft' qualitative data can help to provide the context – the story of the family behind the quantitative data – and provide greater evidence of improvements in child and family outcomes.

Throughout our research, we have come across examples of new and emerging tools that have been developed to help children's centres capture individual and family changes in a more standardised fashion. During our field visits, the *Outcomes STAR*[390] and *Soft Outcomes Universal Learning* (*SOUL)*[391] tools were regularly mentioned as being easy to use and helpful tools. Research has found the Outcomes STAR to have good reliability[392]. However, both tools come with purchasing and/or training costs, and further validation of the tools is required.

Such commercial tools can help show a clearer picture of outcomes achieved for individuals, in particular, changes of attitude, behaviour and skills that are difficult to measure quantifiably. They are typically suited for use with targeted families identified as potentially benefitting from additional support, and are thus suitable for use in situations where families and professionals are able to engage in one-to-one support over a period of time (and are thus best suited to specific programmes of work). Ideally, the tools should be completed with parents at the start, review, and exit from the service and programme. As well as showing individual outcomes more clearly (by comparing start and end average scores), soft data gathered using the tools can also help children's centres to evidence the proportion of service/programme users who have made positive progress (as well as those who stabilised or went downhill), across a number of areas. However, staff will also require specific training in administering these tools.

Tracking families

It is important that early years providers work together to track and monitor each family's journey into and out of children's centres in order to help evidence impact, prevent duplication of baseline data and avoid families being re-referred to the same interventions. Developing effective tracking systems will also enable services to better evidence long-term and sustained outcomes.

Ideally, local authorities will be supported by central government to ensure that early childhood services can agree appropriate consent for data linkage with parents. This will enable the implementation of appropriate tracking systems, linking children's centre outcomes data with EYFSP data held by local authorities and the Department for Education, as children and families transition from early childhood services to school and beyond.

Embedding the measures

Throughout the course of the research, we have been made aware of some of the difficulties children's centres face when attempting to measure impact. To embed and measure the outcomes framework successfully, these challenges will need to be overcome. Recurring measurement challenges include:

- Not all services share data reliably and accurately, often as a consequence of data protection and confidentiality guidelines. Health services, social care, the Department for Work and Pensions and schools were most frequently cited as not always sharing adequate data. However, successful data-sharing is reported where good and trusting relationships have been nurtured, indicating that this challenge can be overcome.

- Data provided from different sources is sometimes not accurate and refers to different geographic areas, so the data is often not in a useable format for children's centres. One children's centre manager told us:

  "Out-of-date and fragmented data's an issue: some data refers back to 2010, or 2008; it doesn't reflect the current population and doesn't overlap with our children's centre data. It doesn't marry with local knowledge and local trends, which makes it difficult to make accurate comparisons. Yet everyone's looking at children's centres to make sense of all this information." [393]

This further complicates the job of outreach and family support workers. However, we did see evidence of excellent partnership working that eased these data-sharing issues where trusting relationships between partners had been developed, supported by regular data-sharing meetings and supplemented with simple and efficient protocols for data-sharing as and when new information became available.

- Data is often collected and collated in isolation and not drawn together, so there is duplication of work or sometimes conflicting information presented.

- Families are entitled to access services that are based in areas convenient for them, so parents/carers can thus be registered with and use a number of different children's centres, sometimes across local authority boundaries. Furthermore, certain areas of the country, such as London, typically have higher proportions of transient families, which makes achieving and measuring sustained contact and outcomes particularly challenging.

- There is a lack of standardised software systems: a variety of software systems to capture data are used by centres and services, which makes comparison and matching of data challenging.

- Children's centres spoke of the difficulties in obtaining reliable data from parents, especially when measurement tools seem to focus on 'fault-finding'. For example, there is a tendency for only satisfied service users to return programme feedback forms. However, we found evidence of children's centres devising innovative ways to obtain more reliable data, such as recruiting 'parent mentors' and a 'Big Brother' room utilising space and technology to appeal to fathers. Another limitation of measuring is for professionals to be given answers that they don't believe to be true. For example, one children's centre user told us: "I tell them I don't smoke, then go out for a cigarette." This is known as 'social desirability bias'.

- Another challenge is that some service users do not read English or are unable to read, resulting in users occasionally missing out some or all of the questions, or becoming fearful of what they are being asked to complete.

- Some professionals spoke of feeling uncomfortable working through questionnaires, designed to gather baseline data, with families so soon after they start engaging with the centre or service. They fear it will deter families from accessing the centres, or alternatively, that families will feel compelled to respond in order to access a service. Our research found that overall parents were happy to provide feedback, as long as they understood the reasons for the data collection, that it wasn't going to have negative implications for them, and that it wasn't too arduous or time-consuming.

- Professionals do not always feel competent in using quantitative measures and sometimes fear the use of numerical techniques.

- Perverse incentives were also mentioned as a potential risk. For example, there is a risk that centres focus resources on engaging families who are easy to reach or support, as opposed to those who would benefit the most.

To successfully embed the IHE's outcomes framework and associated measures, a whole-system approach will be necessary. Data and partnerships challenges, as described above, as well as issues regarding access and provision, will need to be addressed. We thus make a number of recommendations for government, decision-makers and practitioners, as well as for further research, where gaps/weaknesses have been identified.

Key recommendations for government and local authority decision-makers:

1. Children's centres are highly valued by families and are successful in building trusting relationships. They are one of the key vehicles through which parents can be engaged in discussions about parenting and the context in which parenting takes place – the most significant influences on children's outcomes. To embed the outcomes framework and associated measures successfully, it is thus imperative that commissioners of early years services ensure that family-centred services are available and accessible to all families within the locality.

2. Supporting families to support their children's learning and development is one of the most important things we can do to improve outcomes for children. It is

vital that national and local government policy and practice continues to recognise the importance of improving parental skills and employability as a crucial aspect of achieving school readiness, and that children's centres can uniquely facilitate access and engagement to adult learning courses and providers.

3. Local authorities need to recognise the value that early intervention can play in reducing long-term costs, and to invest in children's centres as hubs for local improvement activity.

4. We reinforce the recommendation made in the *Sure Start Children's Centres Statutory Guidance* (2013)[394] that local authorities and commissioners of health services develop or strengthen local partnership agreements and information-sharing protocols between Government – particularly the DWP – local authorities, health, and children's centres and linked services to ease and enable 'effective sharing of data, whilst ensuring that the requirements of the Data Protection Act 1998, and other relevant legal provisions, are complied with'.

5. Central government should support local authorities to ensure that early childhood services can agree appropriate consent for data linkage with parents, to enable appropriate tracking systems.

6. Families are not restricted to accessing services within geographical boundaries. It is important that local authorities, children's centres and key partners agree joint outcome targets and work together efficiently to track families to the best of their ability in order to avoid double-counting families, and to help evidence long-term and sustained outcomes.

7. Universal measurement of maternal well-being is futile if mental health services are not available to support those identified as potentially benefitting from such provision. Local authorities and NHS agencies should ensure that there is sufficient provision to match identified need.

8. Practitioners need to feel confident in data collection and measurement, and the reasons for doing so. Training to inform, support and develop staff in this area will be necessary.

9. The recent report of the All Party Parliamentary Sure Start Group[395] included a note on the registration of births in children's centres. There is current provision of birth registration within children's centres in Bury, Manchester and York, and benefits include improved reach, sustained engagement, reduced stigma and increased father involvement. We support the Sure Start APPG recommendation for cross-governmental political commitment for the provision of birth registration within children's centres.

Key recommendations for practitioners

1. The reliability and accuracy of parent self-report data can be improved if children's centres build trusting relationships with families, explaining the purpose of the data collection and how it can help professionals to find the ways and means to help them if they need or want further support.

2. Children's centres and health services need to ensure the context of data collection is as non-threatening and non-judgemental as feasibly possible when collecting parent self-report data in order to overcome data challenges, including unreliable and missing data.

3. Where measurement tools rely on parent self-report data, professionals should work through questions with users who require additional support.

4. Children's centres and partner agencies should develop consent procedures with parents to ensure data can be shared appropriately and confidentially between children's centres and other services.

5. Early childhood services should work closely together to share good practice knowledge, particularly in assessing and detecting parental stress and mental health problems.

Key recommendations for researchers

1. Further work is necessary to evaluate the revised EYFS framework and associated *Early Years Outcomes* non-statutory guidance as a tool to monitor individual children's development pathways.

2. Recent research by NICE has identified problems with the standardised use of the BMI measure across different populations. Further evaluations are therefore required to determine the appropriateness of the standardised BMI measure across different populations.

3. Assessing carbon monoxide exposure through breath tests, urine or saliva tests is more reliable than using self-report measures. We therefore support NICE's recommendations to encourage mothers to be CO tested by health professionals during the antenatal period, *as a means of raising awareness about the risk of tobacco and targeting appropriate support*. However, further clarification is needed over what is the optimal cut-off point for determining smoking status[396].

4. Further research is necessary to evaluate self-report data collection methods in order to develop and/or promote strategies for improving the quality of interview/survey smoking data.

5. Existing breastfeeding measurement approaches need further validation and refinement in order to develop standardised data collection methods to improve the accuracy of breastfeeding rate data.

6. Additional validation studies are required to assess the use of tools to assess the home learning environment, including further validation work for the Early Home Learning Environment Index.

7. We reinforce recommendations in the NICE guidelines on Antenatal and Postnatal Mental Health[397] for a validation study of the Whooley questions for use with postnatal women.

8. Further work is required to develop and/or validate a reliable predictive measurement tool for routine clinical assessment of mental health in the antenatal and postnatal periods.

9. Research is welcomed to develop a quantitative, validated measure of maternal well-being for use with the wider community and for administration by non-clinical professionals.

10. Further validation work is required to establish a 'gold standard' resilience measurement tool.

11. As maternal networks of support are closely interrelated with maternal stress and mental health, measures to assess pregnancy-specific social support should be developed and validated to support this area of work. Tools to specifically measure paternal networks of support, or further work to evaluate adapted versions of existing tools, are also needed, especially as fathers are often part of children's centre's target population groups.

12. We recommend further research to develop effective quantitative, comparative and universal measures of employment and work–life balance.

Testing the measures and developing a composite measure

The ideal next step would be to start to embed this evaluation framework within a number of local authorities. Children's centre managers and commissioners within a number of local authorities ideally would work with health and well-being boards to embed the framework and ensure good interagency collaboration. This would enable areas to measure the effectiveness of such a multi-agency approach on a wide population basis.

Further research would compare longer-term effects for children and families engaging with participating children's centres (that is, children's centres within local authorities that were embedding the outcomes framework and implementing a whole-system approach), with a controlled comparison group of children and families, matched with a range of characteristics, who were engaging with children's centres in non-participating

local authorities. Longer-term impact could also be measured by the EYFS Profile at age five.

Such embedding work would support the development of a new, shorter and tested composite measure of the essential outcomes for children's centres to use. The IHE will be considering this as part of a programme of ongoing research.

Developing an electronic tool

Throughout the course of the research we repeatedly heard the limitations of existing data systems. For example, the IT systems used by Health, such as the Public Assistance Reporting Information System (PARIS), and often-used TRIBAL or E-Start databases used by children's centres, are not integrated, resulting in duplication of data and outcome tracking difficulties.

As new research and evaluation studies emerge, it will be necessary to update and revise the outcomes framework. An electronic version of the framework will enable it to become a 'live' document that can be edited easily. There is thus scope for a feasibility study to examine the potential for developing an integrated digital version of the outcomes framework, which children's centres and parents could use to input observation and assessment data. An e-outcomes framework could potentially complement or integrate with the new digital version of the Personal Child Health Record (PCHR)[398] or 'e-Redbook' (the UK's first digital Personal Child Health Record that includes material from the Healthy Child Programme).

Identifying the programmes and activities that impact the essential outcomes

Using measures successfully is an important part of understanding and therefore improving services for children and families. However, measurement on its own can rarely leads to improvements, much in the same way that money cannot be earned just by counting it.

Now that children's centres know *what* outcomes they should be working towards and *why*, and *which ones* are the most appropriate, currently available methods to monitor and measure their impact. A further crucial step, therefore, is to understand and promote the '*how*': identifying the *programmes* and *activities* that impact and best

support the achievement of the essential outcomes. We hope that the work of the Early Intervention Foundation (EIF) will meet these needs and we intend to work closely with them to ensure that a coordinated set of messages is received.

Appendix A – Glossary

Activities – The actions and services as a result of inputs (see 'inputs' below).

Baseline – The starting position of a service or programme, based on a range of indictors, and ideally before any service has been offered. Baseline information can help services to monitor changes and improvements, attributable or at least partially attributable to the service/intervention offered.

Benchmark – An externally-agreed comparator to compare performance between similar services or areas.

Children's centres – The statutory definition is: 'A Sure Start Children's Centre is a place or a group of places: which is managed by or on behalf of, or under arrangements with, the local authority with a view to securing that early childhood services in the local authority's area are made available in an integrated way; through which early childhood services are made available (either by providing the services on site, or by providing advice and assistance on gaining access to services elsewhere); and at which activities for young children are provided.'[399]

Community-level (group) measure – For the purposes of this report, these are measures at the level of populations served by children's centres and linked services – typically, this will be counts of individuals/households aggregated up to a community (group) level. Practitioners utilising community-level measures will be part of the 'bigger picture' of measuring children's outcomes.

Early childhood services – Early years provision (early education and childcare); social services functions of the local authority relating to young children, parents and prospective parents; health services relating to young children, parents and prospective parents; training and employment services to assist parents or prospective parents; and information and advice services for parents and prospective parents.

Indicator – A succinct descriptor that aims to clearly describe, compare and improve an activity or service. They indicate that a particular outcome has occurred. Indicators need to be quantifiable in some way and appropriate to the outcome.

Interim (short-term) outcome – A 'stepping stone' by which distance travelled/ progress made can be assessed on the journey to longer-term outcomes being achieved. Often, shorter-term outcomes need to be achieved and evidenced before longer-term outcomes can be realised.

Inputs – The resources, including capital, staff, volunteers, facilities and partners, that are used to plan, implement and run an activity or service.

Monitoring/measuring – The process of regular follow-up for specific descriptors, with a view to action when a particular threshold is reached or crossed.

Outcome – A measurable change, sometimes attributable, or partly attributable to an earlier intervention. Outcomes and distance travelled, as a result of inputs, outputs, activities and interim (short-term) outcomes, can be measured using outcome indicators or measurement tools.

Outcome indicator – A measure that helps evidence whether outcomes are being achieved and whether things are changing in the way anticipated.

Outcome measure – A tool or method (that is, calculations made based on outcome indicators and descriptors), that provides information on a change as a result of an activity or service.

Outcome monitoring tool – For the purposes of this report, a specific, validated instrument to collect information on outcomes.

Output – The productivity of activities and services, such as number of families accessing services and the frequency/quality of activities and services offered.

Output indicator – These measure the quantity and efficiency of activities undertaken by the centre and/or linked services.

Population-level measure – For the purposes of this report, a measure on the scale of local authority/county area populations – typically, this will be counts of individuals/households aggregated up to a community (group) population-level.

Practitioners utilising population-level measures will be part of the 'bigger picture' of measuring children's outcomes.

Pre-measuring – The gathering of baseline data, which forms part of the initial assessment when meeting the family to gather information on their needs to determine how best to support them.

Post-measuring – Gathering of data at the end of specific interventions or work with families (or members of families), or at regular intervals. Measures can also be used after the work has stopped to see if positive changes in behaviour have been sustained and whether families are able to cope with new challenges.

Process Indicator - **These measure the ways in which activities undertaken by the centre or linked services are provided.**

Validity and reliability testing – Research and evaluations that test whether or not a tool is valid and reliable using statistical and non-statistical tests.

Validity testing will demonstrate whether the composite measure captures the concept/information that it purports to measure. Validity can be measured through:

I. *Face validity* (non-statistical test) – are the items judged, at face value, to be appropriate?

II. *Content validity* (non-statistical test) – does the composite measure appear valid to experts and does it incorporate all of the essential aspects of the concept being measured – indirect and direct measures of child health and development?

III. *Construct validity* – does the measure perform as expected in ways that theory suggests it should? Construct validity has the sub-categories of *convergent and divergent/discriminant validity* – items within the composite measure theoretically should (convergent) or should not (discriminant) be correlated with each other, are observed *to be* (convergent) or *not to be* (discriminant) correlated with each other), typically evaluated using correlation coefficients.

IV. *Criterion validity* – subdivided into *concurrent* and *predictive* validity. A composite measure has *concurrent validity* if its results closely relate to those

given by other, ideally 'gold standard', measurement methods. For example, the HOME inventory is considered the gold standard measurement tool of the home learning environment. Longitudinal evaluations would enable the assessment of *predictive validity*: whether the measure predicts some other variable, usually in the future, such as an increased percentage of children achieving a good level of development on the Early Years Foundation Stage (EYFS) profile.

V. *External validity* – do the results of the composite measure hold for other persons in other places at other times? For example, is the composite measure valid for use within children's centres with a mix of delivery contexts and administered by different professionals? This could be tested using a parallel-group, multicentre, randomised trial of children's centres.

VI. *Inter-rater validity* – the degree to which different raters agree in their assessments.

Reliability testing of the composite measure will assess whether the results obtained are repeatable, that is, they produce the same results the majority of times when assessed in the same population during the same time period. Reliability can be tested through:

I. *Internal consistency* – internal consistency for multi-item measures (thus including composite measures) can estimate how much total test scores would vary if slightly different items were used within the measure. It considers whether particular items have a large influence on test scores and research conclusions. It can be tested using Crobach's alpha (a coefficient of internal consistency).

II. *Test-retest reliability* – test-retest reliability is the relative consistency of the composite measure over time, which is quantified using the interclass correlation coefficient.

Qualitative measure – A measure that is descriptive in nature. It considers information which can be observed but not measured.

Quantitative measure – A measure that involves a numeric value and considers data that can be quantifiably measured.

Screening/diagnostic tool – A tool for use with individuals and that provides information on the individual progress of users. Typically, a cut-off point will be provided to determine whether additional support or referral is required.

Setter bias – Bias that occurs due to the person asking the questions having some vested interest in the answer received, so that they might consciously or unconsciously direct the respondent to answer the question in a certain, favourable way.

Appendix B – Appropriateness of measures

Outcome	Measure descriptor(s)	Measure currently widely used within children's centres / local authorities in England	'Gold Standard' measure*	Satisfactory measure**
A. Effective outreach and sustained engagement with the wider community, with a particular focus on the most disadvantaged families	1. % of disadvantaged and all families with young children (0-5) registered and who have sustained contact with children's centre (community and population-level measure).	✓		✓ The indicators have been adapted slightly to incorporate the quality of engagement and provision (through the proxy measure of 'sustained engagement'), thus the measure will require additional testing.
1. All children are developing age appropriate skills in drawing and copying	1. 'Good level of development' indicator - % of children achieving a 'good level of development' on the EYFSP at age 5	✓		✓
	2. 'Narrowing the gap' indicator - narrowing the gap between the lowest achieving 20% in the EYFSP and all children	✓		✓
	3. Early Years Foundation Stage Framework (EYFSF) and supporting non-statutory guidance (typical behaviours at different developmental milestones).	✓		✓
	4. Ages and Stages Questionnaire (ASQ -3; ASQ;SE).	✓	✓	
2. Children increase the level to which they pay attention during activities and to the people around them	See outcome 1			
3. Children are developing age appropriate comprehension of spoken and written language	See outcome 1			
4. Children are building age appropriate use of spoken and written language	See outcome 1			
5. Children are engaging in age appropriate play	See outcome 1			
6. Children have age appropriate self-management and self control	See outcome 1			
7. Fewer children born with low birth-weight	1. % of term babies born with low birth weight	✓	✓	
8. Fewer children with high or low Body Mass Index	1. % of children with high or low Body Mass Index (standardised BMI measure)	✓	✓	Considered gold Standard measure but further research required to determine cross-cultural validity.
9. Fewer mothers exposed to tobacco smoke during pregnancy	1. Smoking status at time of delivery indicator	✓	Biochemical measures of CO levels are thought to be the gold standard measure - but not practical for children's centres.	✓
	2.. % of women identified as being exposed to carbon monoxide (CO) during pregnancy	✓		✓
	3. % of households with at least one smoker: referred to smoking cessation programmes; who set a quit smoking date, and' who ultimately quit	✓		✓
10. More mothers who breastfeed	1. % of mothers who totally or partially breastfeed at initiation, 6-8 weeks and longer	✓	✓	
	2. % of mothers attending breastfeeding / peer support groups	✓		✓
11. More parents regularly talking to their child using a wide range of words and sentence structures, including songs, poems and rhymes	1. The Early Home Learning Environment Index (EHLEI)		The Home Observation for Measurement of the Environment (HOME) is consider the 'Gold Standard' measure of the home environment, but is not practical for children's settings.	✓
12. More parents are reading to their child every day	See outcome 11			
13. More parents are regularly engaging positively with their children	1. The Keys to Interactive Parenting Scale (KIPS)		The Home Observation for Measurement of the Environment (HOME) is consider the 'Gold Standard' measure of the home environment, but is not practical for children's settings.	✓
14. Improved parental responsiveness and secure parent-child attachment	See outcome 13. Ainsworth's Strange Situation measure is considered the 'gold standard' measure for this outcome, but again not practical for routine use within children's centres.			
15. More parents are setting and reinforcing boundaries	See outcome 13			
16. More parents are experiencing lower levels of stress in their home and in their lives	1. General Health Questionnaire (GHQ-12) / Patient Health Questionnaire (PHQ) or similar 2. Life Satisfaction and Affect Balance indicators	✓	Further work is required to develop and/or validate a reliable predictive measurement tool for routine clinical assessment. Measures of mental health not deemed appropriate for children's centres.	✓
17. More parents with good mental wellbeing				
18. More parents have greater levels of support from friends and/or family	1. Multi-dimensional Scale of Perceived Social Support (MSPSS)		Further work is necessary to develop and validate tools to monitor all aspects of maternal social support in the UK.	✓
19. More parents are improving their basic skills, particularly in literacy and numeracy	1. % of children centre users with low-level qualifications achieving entry, foundation and intermediate level numeracy and literacy qualifications			✓
20. More parents are increasing their knowledge and application of good parenting	See outcome 13			
21. More parents are accessing good work or developing the skills needed for employment, particularly those furthest away from the labour market.	1. % of families in work	✓	✓	
	2. % of families identified as willing/able to work in receipt of job-seekers allowance and/or low income benefits	✓		✓
	3. 'satisfaction with allocation of time' indicator			✓
	4. % of families attending and completing 'work readiness' and learning skills programmes	✓		✓
	5. % of families accessing high quality, affordable early education	✓		✓

*' Gold standard' measures refer to measures: for which there are published peer-reviewed studies that have demonstrated that the measure is highly reliable and valid, and; that appear suitable for use within childen's centres.
** 'Satisfactory' measures refer to measures: that require additional validation and/or modification, or; where identified 'gld standard' measures are not deemed practical for use within children's centres.
Further information to support this summary table can be found within the children's centre guide and technical report.

Appendix C – Copies of selected tools

Outcome	Increased effective outreach and sustained engagement with the wider community, with a particular focus on the most disadvantaged families
Measure	Indicator: % of disadvantaged and all families with young children (0-5) registered and who have sustained contact with children's centre (community and population-level measure).
Permission	Public domain
Cost	Free

Outcome	1. All children are developing age appropriate skills in drawing and copying. 2. Children increase the level to which they pay attention during activities and to the people around them. 3. Children are developing age appropriate comprehension of spoken and written language. 4. Children are building age appropriate use of spoken and written language. 5. Children are engaging in age appropriate play. 6. Children have age appropriate self-management and self control.
Measures	**1. Early Years Foundation Stage Profile (EYFS) Profile – associated measures:** • % of children achieving a 'good level of development' (GLD) on the EYFS Profile at age 5 (population-level measure of school readiness) • Narrowing the gap between the lowest achieving 20% in the EYFS Profile and all children (population-level measure of reduced inequalities). **2. Measurement instructions in the non-statutory guidelines to support the EYFS Framework:** DfE (2013) Early Years Outcomes: A non-statutory guide for practitioners and inspectors to help inform understanding of child development through the early years. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/237249/Early_Years_Outcomes.pdf See also: Early Education (2012) Development Matters in the Early Years Foundation Stage (EYFS). Resource available to download from: http://www.foundationyears.org.uk/wp-content/uploads/2012/03/Development-Matters-FINAL-PRINT-AMENDED.pdf Early Support (2012) Early Years Developmental Journal. Early Support / The Open University. Resources available to download from: www.ncb.org.uk/early-support. **3. Ages and Stages Questionnaire third edition (ASQ-3) , and Ages and Stages: Social and Emotional questionnaire (ASQ:SE) .**
Permission	EYFSF/EYFSP and non-statutory guidelines to support the EYFSF are in the public domain. ASQ-3 and ASQ:SE permission with purchase.
Cost	EYFSF/EYFSP and non-statutory guidelines to support the EYFSF are free ASQ-3 and ASQ:SE - various packages available c.£200 for starter kits and c.£930 for ASQ-3 and ASQ:SE complete package.
For further information see:	http://agesandstages.com/ http://agesandstages.com/asq-products/asq-3/studies-on-asq-3/

Outcome	Measurement instruction	Age range
1. All children are developing age-appropriate skills in drawing and copying	Enjoys the sensory experience of making marks in damp sand, paste or paint. Holds pen or crayon using a whole hand (palmar) grasp and makes random marks with different strokes.	8-20 months
	Can imitate drawing simple shapes (e.g., circles and lines). Experiments with blocks, colours and marks. Distinguishes between the different marks they make.	22-36 months
	Can draw lines and circles using gross motor movements (e.g., circles and lines). Can copy some letters (e.g., letters from their name). Sometimes gives meaning to marks as they draw and paint.	30-50 months
	Gives meaning to marks they make as they draw, write and paint. Begins to use anticlockwise movement and retrace vertical lines.	40 to 60+ months
2. Children increase the level to which they pay attention during activities and to the people around them	Turns towards a familiar sound then locates range of sounds with accuracy. Listens to, distinguishes and responds to intonations and sounds of voices. Reacts in interaction with others by smiling, looking and moving. Quietens or alerts to the sound of speech. Looks intently at a person talking, but stops responding if speaker turns away. Listens to familiar sounds, words, or finger plays. Fleeting Attention – not under child's control, new stimuli takes whole attention.	Birth-11 months
	Moves whole bodies to sounds they enjoy, such as music or a regular beat. Has a strong exploratory impulse. Concentrates intently on an object or activity of own choosing for short periods. Pays attention to dominant stimulus – easily distracted by noises or other people talking.	8-20 months
	Listens to and enjoys rhythmic patterns in rhymes and stories. Enjoys rhymes and demonstrates listening by trying to join in with actions or vocalisations. Rigid attention – may appear not to hear.	16-26 months
	Listens with interest to the noises adults make when they read stories. Recognises and responds to many familiar sounds, e.g. turning to a knock on the door, looking at or going to the door. Shows interest in play with sounds, songs and rhymes. Single channelled attention. Can shift to a different task if attention fully obtained – using child's name helps focus.	22-36 months
	Listens to others one to one or in small groups, when conversation interests them. Listens to stories with increasing attention and recall. Joins in with repeated refrains and anticipates key events and phrases in rhymes and stories. Focusing attention – still listen or do, but can shift own attention. Is able to follow directions (if not intently focused on own choice of activity).	30-50 months
	Maintains attention, concentrates and sits quietly during appropriate activity. Two-channelled attention – can listen and do for short span.	40-60 months+

Outcome	Measurement instruction	Age range
3. Children are developing age appropriate comprehension of spoken and written language	Stops and looks when hears own name. Starts to understand contextual clues, e.g. familiar gestures, words and sounds.	Birth-11 months
	Responds to the different things said when in a familiar context with a special person (e.g. 'Where's Mummy?', Where's your nose?'). Understanding of single words in context is developing, e.g. 'cup', 'milk', 'daddy'.	8-20 months
	Selects familiar objects by name and will go and find objects when asked, or identify objects from a group. Understands simple sentences (e.g. 'Throw the ball'.)	16-26 months
	Identifies action words by pointing to the right picture, e.g. "Who's jumping?" Understands more complex sentences, e.g. 'Put your toys away and then we'll read a book.' Understands 'who', 'what', 'where' in simple questions (e.g. who's that? What's that? Where is?). Developing understanding of simple concepts (e.g. big/little).	22-36 months
	Understands use of objects (e.g. "What do we use to cut things?') Shows understanding of prepositions such as 'under', 'on top', 'behind' by carrying out an action or selecting correct picture. Responds to simple instructions, e.g. to get or put away an object. Beginning to understand 'why' and 'how' questions. Beginning to be aware of the way stories are structured. Suggests how the story might end. Describes main story settings, events and principal characters. Recognises familiar words and signs such as own name and advertising logos.	30-50 months
	Responds to instructions involving a two-part sequence. Understands humour, e.g. nonsense rhymes, jokes. Able to follow a story without pictures or props. Listens and responds to ideas expressed by others in conversation or discussion. Knows information can be relayed in the form of print. Knows that print carries meaning and, in English, is read from left to right and top to bottom.	40-60 months+

Outcome	Measurement instruction	Age range
4. Children are building age appropriate use of spoken and written language	Communicates needs and feelings in a variety of ways including crying, gurgling, babbling and squealing. Makes own sounds in response when talked to by familiar adults. Lifts arms in anticipation of being picked up. Practises and gradually develops speech sounds (babbling) to communicate with adults; says sounds like 'baba, nono, gogo'. Children's later writing is based on skills and understandings which they develop as babies and toddlers. Before they can write, they need to learn to use spoken language to communicate. Later they learn to write down the words they can say.	Birth-11 months
	Uses sounds in play, e.g. 'brrrm' for toy car. Uses single words. Frequently imitates words and sounds. Enjoys babbling and increasingly experiments with using sounds and words to communicate for a range of purposes (e.g. teddy, more, no, bye-bye). Uses pointing with eye gaze to make requests, and to share an interest. Creates personal words as they begin to develop language. Early mark-making is not the same as writing. It is a sensory and physical experience for babies and toddlers, which they do not yet connect to forming symbols which can communicate meaning.	8-20 months
	Copies familiar expressions, e.g. 'Oh dear', 'All gone'. Beginning to put two words together (e.g. 'want ball', 'more juice'). Uses different types of everyday words (nouns, verbs and adjectives, e.g. banana, go, sleep, hot). Beginning to ask simple questions. Beginning to talk about people and things that are not present.	16-26 months
	Uses language as a powerful means of widening contacts, sharing feelings, experiences and thoughts. Holds a conversation, jumping from topic to topic. Learns new words very rapidly and is able to use them in communicating. Uses gestures, sometimes with limited talk, e.g. reaches towards toy, saying 'I have it'. Uses a variety of questions (e.g. what, where, who). Uses simple sentences (e.g.' Mummy gonna work.') Beginning to use word endings (e.g. going, cats). Distinguishes between the different marks they make.	22-36 months

Outcome	Measurement instruction	Age range
4. Children are building age appropriate use of spoken and written language	Beginning to use more complex sentences to link thoughts (e.g. using and, because). Can retell a simple past event in correct order (e.g. went down slide, hurt finger). Uses talk to connect ideas, explain what is happening and anticipate what might happen next, recall and relive past experiences. Questions why things happen and gives explanations. Asks e.g. who, what, when, how. Uses a range of tenses (e.g. play, playing, will play, played). Uses intonation, rhythm and phrasing to make the meaning clear to others. Uses vocabulary focused on objects and people that are of particular importance to them. Builds up vocabulary that reflects the breadth of their experiences. Uses talk in pretending that objects stand for something else in play, e.g. 'This box is my castle.' Describes main story settings, events and principal characters. Sometimes gives meaning to marks as they draw and paint. Ascribes meanings to marks that they see in different places	30-50 months
	Extends vocabulary, especially by grouping and naming, exploring the meaning and sounds of new words. Uses language to imagine and recreate roles and experiences in play situations. Links statements and sticks to a main theme or intention. Uses talk to organise, sequence and clarify thinking, ideas, feelings and events. Introduces a storyline or narrative into their play Begins to form recognisable letters. Uses a pencil and holds it effectively to form recognisable letters, most of which are correctly formed. Gives meaning to marks they make as they draw, write and paint. Begins to break the flow of speech into words. Continues a rhyming string. Hears and says the initial sound in words. Can segment the sounds in simple words and blend them together. Links sounds to letters, naming and sounding the letters of the alphabet. Uses some clearly identifiable letters to communicate meaning, representing some sounds correctly and in sequence. Writes own name and other things such as labels, captions. Attempts to write short sentences in meaningful contexts.	40-60 months+

Outcome	Measurement instruction	Age range
5. Children are engaging in age appropriate play	Repeats actions that have an effect, e.g. kicking or hitting a mobile or shaking a rattle.	Birth-11 months
	Passes toys from one hand to the other. Holds an object in each hand and brings them together in the middle, e.g. holds two blocks and bangs them together. Uses sounds in play, e.g. 'brrrm' for toy car. Becomes absorbed in combining objects, e.g. banging two objects or placing objects into containers. Knows things are used in different ways, e.g. a ball for rolling or throwing, a toy car for pushing Watches toy being hidden and tries to find it.	8-20 months
	Explores new toys and environments, but 'checks in' regularly with familiar adult as and when needed. Gradually able to engage in pretend play with toys (supports child to understand their own thinking may be different from others). Plays alongside others. Plays cooperatively with a familiar adult, e.g. rolling a ball back and forth. Attempts, sometimes successfully, to fit shapes into spaces on inset boards or jigsaw puzzles. Shows interest in toys with buttons, flaps and simple mechanisms and beginning to learn to operate them. Explores objects by linking together different approaches: shaking, hitting, looking, feeling, tasting, mouthing, pulling, turning and poking. Matches parts of objects that fit together, e.g. puts lid on Teapot. Enjoys filling and emptying containers. Pretends that one object represents another, especially when objects have characteristics in common.	16-26 months
	Climbs confidently and is beginning to pull themselves up on nursery play climbing equipment. Shows control in holding and using jugs to pour, hammers, books and mark-making tools Interested in others' play and starting to join in In pretend play, imitates everyday actions and events from own family and cultural background, e.g. making and drinking tea. Enjoys playing with small-world models such as a farm, a garage, or a train track. Seeks to acquire basic skills in turning on and operating equipment. Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car. Shows interest in play with sounds, songs and rhymes. Shows an interest in the way musical instruments sound. Enjoys joining in with dancing and ring games.	22-36 months

Outcome	Measurement instruction	Age range
5. Children are engaging in age appropriate play	Can play in a group, extending and elaborating play ideas, e.g. building up a role-play activity with other children. Initiates play, offering cues to peers to join them. Keeps play going by responding to what others are saying or doing. Shows an interest in shape and space by playing with shapes or making arrangements with objects Knows how to operate simple equipment. Shows an interest in technological toys with knobs or pulleys, or real objects. Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. Engages in imaginitive role-play based on own first-hand experiences Builds stories around toys, e.g. farm animals needing rescue from an armchair 'cliff' Uses available resources to create props to support role-play	30-50 months
	Introduces a storyline or narrative into their play. Negotiates space successfully when playing racing and chasing games with other children, adjusting speed or changing direction to avoid obstacles. Completes a simple program on a computer. Interacts with age-appropriate computer software Plays alongside other children who are engaged in the same theme. Plays cooperatively as part of a group to develop and act out a narrative.	40-60 months+

Outcome	Measurement instruction	Age range
6. Children have age appropriate self-management and self control	Is comforted by touch and people's faces and voices. Seeks physical and emotional comfort by snuggling into trusted adults. Calms from being upset when held, rocked, spoken or sung to with soothing voice. Shows a range of emotions such as pleasure, fear and excitement. Reacts emotionally to other people's emotions, e.g. smiles when smiled at and becomes distressed if hears another child crying.	Birth-11 months
	Uses familiar adult to share feelings such as excitement or pleasure, and for 'emotional refuelling' when feeling tired, stressed or frustrated. Growing ability to soothe themselves, and may like to use a comfort object. Cooperates with caregiving experiences, e.g. dressing. Beginning to understand 'yes', 'no' and some boundaries.	8-20 months
	Is aware of others' feelings, for example, looks concerned if hears crying or looks excited if hears a familiar happy voice. Growing sense of will and determination may result in feelings of anger and frustration which are difficult to handle, e.g. may have tantrums. Responds to a few appropriate boundaries, with encouragement and support. Begins to learn that some things are theirs, some things are shared, and some things belong to other people.	16-26 months
	Seeks comfort from familiar adults when needed. Can express their own feelings such as sad, happy, cross, scared, worried. Responds to the feelings and wishes of others. Aware that some actions can hurt or harm others. Tries to help or give comfort when others are distressed. Shows understanding and cooperates with some boundaries and routines. Can inhibit own actions/behaviours, e.g. stop themselves from doing something they shouldn't do. Growing ability to distract self when upset, e.g. by engaging in a new play activity.	22-36 months
	Aware of own feelings, and knows that some actions and words can hurt others' feelings. Begins to accept the needs of others and can take turns and share resources, sometimes with support from others. Can usually tolerate delay when needs are not immediately met, and understands wishes may not always be met. Can usually adapt behaviour to different events, social situations and changes in routine.	30-50 months
	Understands that own actions affect other people, for example, becomes upset or tries to comfort another child when they realise they have upset them. Aware of the boundaries set, and of behavioural expectations in the setting. Beginning to be able to negotiate and solve problems without aggression, e.g. when someone has taken their toy	40-60 months+

Source: DfE (2013) *Early Years Outcomes: A non-statutory guide for practitioners and inspectors to help inform understanding of child development through the early years.*

Outcome	7. Fewer children born with low birth weight.
Measure	Indicator: % of term babies born with low birth weight (population-level measure)
Permission	Public domain
Cost	Free

Outcome	8. Fewer children with high or low Body Mass Index
Measure	Indicator: % of children with high or low BMI
Permission	Public domain
Cost	Free

Outcome	9. Fewer mothers exposed to tobacco smoke during pregnancy
Measure	Indicator: % of women identified as being exposed to carbon monoxide (CO) during pregnancy. Indicator: % of households with at least one smoker: referred to smoking cessation programmes; who set a quit smoking date; who ultimately quit.
Permission	Public domain
Cost	Free

Outcome	10. More mothers who breastfeed
Measures	Indicator: % of mothers who totally or partially breastfeed at initiation, 6-8 weeks and longer (ideally 3-4, 6 and 12 months). Indicator: % of mothers attending breastfeeding / peer-support groups.
Permission	Public domain
Cost	Free

Outcome	11. More parents regularly talking to their child using a wide range of words and sentence structures, including songs, poems and rhymes. 12. More parents are reading to their child every day
Measures	The Early Home Learning Environment Index (EHLEI)
Permission	Public domain
Cost	Free
Recommended citation:	Melhuish, E., Phan, M., Sylva, K., Sammons, P., Siraj-Blatchford, I. & Taggart, B. (2008) Effects of the Home Learning Environment and Preschool Centre Experience upon Literacy and Numeracy Development in Early Primary School, Journal of Social Issues, Vol. 64, No. 1, 2008, pp. 95--114

The seven activities included in the EHLEI, include frequency of:

- Parent reading to the child

- Parent taking their child to the library
- Child playing with letters
- Parent helping their child to learn the alphabet
- Parent teaching their child numbers or counting
- Parent teaching their child songs, poems or nursery rhymes
- Child painting or drawing at home.

The frequency of each of the seven activities was coded on a 0–7 scale (0 = not occurring, 7 = very frequent), Seven scores are then added to produce an index with a possible range of 0–49.

Outcome	13. More parents are regularly engaging positively with their children. 14. Improved parental responsiveness and secure parent-child attachment. 15. More parents are setting and reinforcing boundaries. 20. More parents are increasing their knowledge and application of good parenting
Measures	Keys to Interactive Parenting Scale (KIPS)
Permission	With purchase
Cost	Various packages and training available. Introductory KIPS eLearning c.£95; annual check-up c.£25; Scoring forms c.£19 for 25.
For further information see:	The KIPS may be ordered through the Comfort Consults website: http://comfortconsults.com/ Scoring forms available in English and Spanish.

Alternative measures of parenting	Parenting Scale
Permission	Public domain
Cost	Free
Recommended citation:	Arnold, D.S., O'Leary, S.G., Wolff, L.S. & Acker, M.M. (1993) The Parenting Scale: A measure of dysfunctional parenting in discipline situations. *Psychological Assessment*, 5, 137–144.
Further information:	Rhoades, K. & O'Leary, S. (2007) Factor Structure and Validity of the Parenting Scale, *Journal of Clinical Child and Adolescent Psychology*, Vol 36(2): 137-146. Contact: Dr. Susan O'Leary, Psychology Department, State University of New York at Stony Brook, New York.

Parenting Scale

Child's Name: _____ Today's Date: _____

Sex: Boy _____ Girl _____ Child's Birth date: _____

Instructions: At one time or another, all children misbehave or do things that could be harmful, that are "wrong," or that parents don't like. Examples include:

hitting someone	whining	not picking up toys
forgetting homework	throwing food	refusing to go to bed
having a tantrum	lying	wanting a cookie before dinner
running into the street	arguing back	coming home late

Parents have many different ways or styles of dealing with these types of problems. Below are items that describe some styles of parenting.

For each item, fill in the circle that best describes your style of parenting during the past two months with **the child indicated above**.

SAMPLE ITEM:

At meal time…

I let my child decide how much to eat.	0---0---●---0---0---0---0	I decide how much my child eats.

1. When my child misbehaves…

I do something right away.	0---0---0---0---0---0---0	I do something about it later.

2. Before I do something about a problem…

I give my child several reminders or warnings.	0---0---0---0---0---0---0	I use only one reminder or warning.

3. When I'm upset or under stress…

I am picky and on my child's back.	0---0---0---0---0---0---0	I am no more picky than usual.

4. When I tell my child not to do something…

I say very little.	0---0---0---0---0---0---0	I say a lot.

5. When my child pesters me…

I can ignore the pestering.	0---0---0---0---0---0---0	I can't ignore pestering.

6. When my child misbehaves…

I usually get into a long argument with my child.	0---0---0---0---0---0---0	I don't get into an argument.

7. I threaten to do things that…

I am sure I can carry out.	0---0---0---0---0---0---0	I know I won't actually do.

8. I am the kind of parent that…

set limits on what my child is allowed to do.	0---0---0---0---0---0---0	lets my child do whatever he/she wants.

9. When my child misbehaves…

I give my child a long lecture.	0---0---0---0---0---0---0	I keep my talks short and to the point.

10. When my child misbehaves…

I raise my voice or yell.	0---0---0---0---0---0---0	I speak to my child calmly.

11. If saying "No" doesn't work right away…

I take some other kind of action.	0---0---0---0---0---0---0	I keep talking and try to get through to my child.

12. When I want my child to stop doing something…

I firmly tell my child to stop.	0---0---0---0---0---0---0	I coax or beg my child to stop.

13. When my child is out of my sight…

I often don't know what my child is doing.	0---0---0---0---0---0---0	I always have a good idea of what my child is doing.

14. After there's been a problem with my child…

I often hold a grudge.	0---0---0---0---0---0---0	things get back to normal quickly.

15. When we're not at home…

I handle my child the way I do at home.	0---0---0---0---0---0---0	I let my child get away with a lot more.

16. When my child does something I don't like…

I do something about it. every time it happens.	0---0---0---0---0---0---0	I often let it go.

17. When there is a problem with my child…

things build up and I do things I don't mean to do.	0---0---0---0---0---0---0	things don't get out of hand.

18. When my child misbehaves, I spank, slap, grab, or hit my child…

never or rarely.	0---0---0---0---0---0---0	most of the time.

19. When my child doesn't do what I ask…

I often let it go or end up doing it myself.	0---0---0---0---0---0---0	I take some other action.

20. When I give a fair threat or warning…

I often don't carry it out.	0---0---0---0---0---0---0	I always do what I said.

21. If saying "No" doesn't work…

I take some other kind of action.	0---0---0---0---0---0---0	I offer my child something nice so he/she will behave.

22. When my child misbehaves…

I handle it without getting upset.	0---0---0---0---0---0---0	I get so frustrated or angry that my child can see I'm upset.

23. When my child misbehaves…

I make my child tell me why he/she did it.	0---0---0---0---0---0---0	I say "No" or take some other action.

24. If my child misbehaves and then acts sorry…

I handle the problem like I usually would.	0---0---0---0---0---0---0	I let it go that time.

25. When my child misbehaves…

I rarely use bad language or curse.	0---0---0---0---0---0---0	I almost always use bad language.

26. When I say my child can't do something…

I let my child do it anyway.	0---0---0---0---0---0---0	I stick to what I said.

27. When I have to handle a problem…

I tell my child I'm sorry about it.	0---0---0---0---0---0---0	I don't say I'm sorry.

28. When my child does something I don't like, I insult my child, say mean things, or call my child names…

never or rarely.	0---0---0---0---0---0---0	most of the time.

29. If my child talks back or complains when I handle a problem…

I ignore the complaining and stick to what I said.	0---0---0---0---0---0---0	I give my child a talk about not complaining.

30. If my child gets upset when I say "No"…

I back down and give in to my child.	0---0---0---0---0---0---0	I stick to what I said.

Alternative measures of parenting	Mothers Object Relations Scale – Child (MORS-Child) Mothers Object Relations Scale – Baby (MORS-SF)
Permission	Public domain
Cost	Free
Recommended citation:	Simkiss, D., MacCallum, F., Fan, E., Oates, J., Kimani, P. and Stewart-Brown, S. (2013) Validation of the mothers object relations scales in 2–4 year old children and comparison with the child–parent relationship scale, *Health and Quality of Life Outcomes* 2013, 11:49
Further information:	MORS-Child: Dr Doug Simkiss Honorary Associate Clinical Professor in Child Health Division of Mental Health and Well-being Warwick Medical School University of Warwick Coventry CV4 7AL T - +44 (0)2476575289 E - d.e.simkiss@warwick.ac.uk MORS-SF: Dr John Oates Child and Youth Studies Group The Open University MK7 6AA T- +44 (0)1908 652395 E- j.m.oates@open.ac.uk MORS-SF is also available in Polish, simplified Chinese

	and Hungarian versions.

Mothers Object Relations Scale – Child (MORS-Child)

Using the scale below, circle the appropriate number for each item. There are no 'right' or 'wrong' answers; many of these are true of all children at times.

Never	Rarely	Sometimes	Quite often	Very often	Always
0	1	2	3	4	5

1.	My child smiles at me	0	1	2	3	4	5
2.	My child annoys me	0	1	2	3	4	5
3.	My child likes doing things with me	0	1	2	3	4	5
4.	My child talks to me	0	1	2	3	4	5
5.	My child irritates me	0	1	2	3	4	5
6.	My child likes me	0	1	2	3	4	5
7.	My child wants too much attention	0	1	2	3	4	5
8.	My child laughs	0	1	2	3	4	5
9.	My child gets moody	0	1	2	3	4	5
10.	My child dominates me	0	1	2	3	4	5
11.	My child like to please me	0	1	2	3	4	5
12.	My child cries for no obvious reason	0	1	2	3	4	5
13.	My child is affectionate towards me	0	1	2	3	4	5
14.	My child winds me up	0	1	2	3	4	5

Mothers Object Relations Scale – Baby (MORS-SF)

My Baby:

Please underline one of the choices for each of the questions below. There are no 'right' or 'wrong' answers; many of these are true of all babies at times.

12. My baby cries for no obvious reason -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

1. My baby smiles at me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

13. My baby is affectionate towards me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

2. My baby annoys me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

14. My baby winds me up -

3. My baby likes doing things with me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

4. My baby 'talks' to me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

5. My baby irritates me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

6. My baby likes me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

7. My baby wants too much attention -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

8. My baby laughs -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

9 My baby gets moody -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

10. My baby dominates me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely
0 Never

11. My baby likes to please me -

5 Always
4 Very often
3 Quite often
2 Sometimes
1 Rarely

0 Never 0 Never

- Print pages 1 and 2 of this document as separate pages
- Set photocopier to copy 1+1 ⇒ 2 (double-sided output)
- Rotate page 2 180°
- Make photocopies
- Fold output in half to make 'My Baby'

Alternative measures of parenting	Karitane Parenting Confidence Scale
Permission	Public domain
Cost	Free
Recommended citation:	Črnčec, R., Barnett, B., & Matthey, S. (2008). Karitane Parenting Confidence Scale: Manual. Sydney South West Area Health Service. Sydney: Australia.
Further information:	Manual available at: http://preventchildabusenj.org/newsletters/hf_weekly/kpcs_manual.pdf

KARITANE PARENTING CONFIDENCE SCALE

FOR PARENTS OF INFANTS

Reference as: Črnčec, R., Barnett, B., & Matthey, S. (in press: 2008). Development of an instrument to assess perceived self-efficacy in the parents of infant. *Research in Nursing and Health.*

Your name: _____ Baby's name: _____

Your age: _____ Baby's age (months): _____

You are baby's (circle): mother / father Number of children including baby: _____

Cultural background:_____ Today's date: _____

This scale has 15 items. Please underline the answer that comes closest to how you generally feel.

Here is an example already completed:

eg. I am confident about holding my baby

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

Office use only.

Page 1 ____

Page 2 ____ +

Total ____

This would mean "*I feel confident about holding my baby some of the time*".

Please complete the other questions in the same way.

1. I am confident about feeding my baby

Not applicable (my partner feeds the baby)
No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

2. I can settle my baby

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

3. I am confident about helping my baby to establish a good sleep routine

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

4. I know what to do when my baby cries

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

Continued over the page ⇨

5. I understand what my baby is trying to tell me

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

6. I can soothe my baby when he / she is distressed

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

7. I am confident about playing with my baby

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

8. If my baby has a common cold or slight fever, I am confident about handling this

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

9. I feel sure that my partner will be there for me when I need support

Not applicable (I don't have a partner)
No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

Reproductions of this scale must include the full scale title and reference and no alterations to wording or formatting.

Office use only:
All items scored 0,1,2,3. N/A=2.

10. I am confident that my baby is doing well

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

11. I can make decisions about the care of my baby

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

12. Being a mother / father is very stressful for me

Yes, most of the time
Yes, some of the time
No, not very often
No, hardly ever

13. I feel I am doing a good job as mother / father

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

14. Other people think I am doing a good job as a mother / father

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

15. I feel sure that people will be there for me when I need support

No, hardly ever
No, not very often
Yes, some of the time
Yes, most of the time

Thank you for completing this questionnaire

Outcome	16. More parents are experiencing lower levels of stress in their home and in their lives 17. More parents with good mental well-being
Measures (Health)	General Health Questionnaire (GHQ-12)
Permission	With purchase
Cost	GHQ-12 questionnaires x 100 c.£70 +VAT; GHQ User Guide c.£100
For further information	GHQ-12 may be ordered through GL Assessments: http://www.gl-assessment.co.uk/products/general-health-questionnaire-0#sthash.ieiCeKNx.dpuf

Outcome	16. More parents are experiencing lower levels of stress in their home and in their lives 17. More parents with good mental well-being
Alternative measure (Health)	Patient Health Questionnaire (PHQ-9)
Permission	Public domain
Cost	Free
Recommended reference	Kroenke, K., Spitzer, R. L., Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16(9): 606-613.

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING 0 + _____ + _____ + _____

=Total Score: _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

Developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display or distribute.

Outcome	16. More parents are experiencing lower levels of stress in their home and in their lives 17. More parents with good mental well-being
Alternative measure (Health)	Hospital Anxiety and Depression Scale (HADS)
Permission	With purchase
Cost	HADS complete set c.£99 +VAT
For further information	HADS may be ordered through GL Assessments: www.gl-assessment.co.uk/products/hospital-anxiety-and-depression-scale-0

Outcome	16. More parents are experiencing lower levels of stress in their home and in their lives 17. More parents with good mental well-being
Alternative measure (Health)	Edinburgh Postnatal Depression Scale
Permission	Public domain
Cost	Free
Recommended citation:	Cox, J. L., Holden, J. M. & Sagovsky, R. (1987) Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale*. British Journal of Psychiatry,* 150*,* 782 *-786*

Outcome	16. More parents are experiencing lower levels of stress in their home and in their lives 17. More parents with good mental well-being
Measure (Children's centre)	Satisfaction with Life Scale (SWLS)
Permission	Public domain
Cost	Free
Recommended reference	Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*, 71-75

Satisfaction with life scale (SWLS)

Below are five statements that you may agree or disagree with. Using the 1–7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 – Strongly agree
- 6 – Agree
- 5 – Slightly agree
- 4 – Neither agree nor disagree
- 3 – Slightly disagree
- 2 – Disagree
- 1 – Strongly disagree

____ In most ways my life is close to my ideal.
____ The conditions of my life are excellent.
____ I am satisfied with my life.
____ So far I have gotten the important things I want in life.
____ If I could live my life over, I would change almost nothing.

- 31–35 Extremely satisfied
- 26–30 Satisfied
- 21–25 Slightly satisfied
- 20 Neutral
- 15–19 Slightly dissatisfied
- 10 –14 Dissatisfied
- 5–9 Extremely dissatisfied

Outcome	16. More parents are experiencing lower levels of stress in their home and in their lives 17. More parents with good mental well-being
Measure (Children's centre)	Positive and Negative Affect Scale
Permission	Public domain
Cost	Free
Recommended reference	Watson, D., Clark, L. A., & Tellegan, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070

PANAS Questionnaire

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment *OR* indicate the extent you have felt this way over the past week (circle the instructions you followed when taking this measure)**

1	2	3	4	5
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

_____ 1. Interested	_____ 11. Irritable
_____ 2. Distressed	_____ 12. Alert
_____ 3. Excited	_____ 13. Ashamed
_____ 4. Upset	_____ 14. Inspired
_____ 5. Strong	_____ 15. Nervous
_____ 6. Guilty	_____ 16. Determined
_____ 7. Scared	_____ 17. Attentive
_____ 8. Hostile	_____ 18. Jittery
_____ 9. Enthusiastic	_____ 19. Active
_____ 10. Proud	_____ 20. Afraid

Scoring Instructions:

Positive Affect Score: Add the scores on items 1, 3, 5, 9, 10, 12, 14, 16, 17, and 19. Scores can range from 10 – 50, with higher scores representing higher levels of positive affect. Mean Scores: Momentary = 29.7 (*SD* = 7.9); Weekly = 33.3 (*SD = 7.2)*

Negative Affect Score: Add the scores on items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20. Scores can range from 10 – 50, with lower scores representing lower levels of negative affect. Mean Score: Momentary = 14.8 (*SD* = 5.4); Weekly = 17.4 (*SD* = 6.2)

Outcome	18. More parents have greater levels of support from friends and/or family
Measures	Multi-dimensional Scale of Perceived Social Support (MSPSS)
Permission	Public domain
Cost	Free
Recommended citation:	Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *52*, 30–41. For further information see: www.yorku.ca/rokada/psyctest/socsupp.pdf

Alternative specific measures of parental-relationship quality	The Relationship Attribution Measure
Permission	Public domain
Cost	Free
Recommended citation:	Fincham, F. and Bradbury, T. Assessing attributions in marriage: The Relationship Attribution Measure. *Journal of Personality and Social Psychology*, Vol 62(3), Mar 1992, 457-468

Relationship Attribution Measure

This questionnaire describes several things that your co-parent might do. Imagine them performing each behaviour and then read the statements that follow it.

Please circle the number that indicates how much you agree or disagree with each statement, using the rating scale below:

1	2	3	4	5	6
Disagree strongly	**Disagree**	**Disagree somewhat**	**Agree somewhat**	**Agree**	**Agree strongly**

Your co-parent criticises something you say:

My co-parent's behaviour was due to something about them (e.g. the type of person they are, the mood they were in)	1	2	3	4	5	6
The reason my co-parent criticised me is *not* likely to change	1	2	3	4	5	6
The reason my co-parent criticised me is something that affects other areas of our relationship	1	2	3	4	5	6
My co-parent criticised me on purpose rather than unintentionally	1	2	3	4	5	6

Your co-parent makes an important decision that will affect the both of you without asking for your opinion:

My co-parent's behaviour was due to something about them (e.g. the type of person they are, the mood they were in)	1	2	3	4	5	6
The reason my co-parent made the decision without me is *not* likely to change	1	2	3	4	5	6
The reason my co-parent made the decision without me is something that affects other areas of our relationship	1	2	3	4	5	6

My co-parent made the decision without me on purpose rather than unintentionally	1 2 3 4 5 6

1	2	3	4	5	6
Disagree strongly	**Disagree**	**Disagree somewhat**	**Agree somewhat**	**Agree**	**Agree strongly**

Your co-parent does not pay attention to what you are saying:

My co-parent's behaviour was due to something about them (e.g. the type of person they are, the mood they were in)	1 2 3 4 5 6
The reason my co-parent didn't pay attention to what I was saying is *not* likely to change	1 2 3 4 5 6
The reason my co-parent didn't pay attention to what I was saying is something that affects other areas of our relationship	1 2 3 4 5 6
My co-parent didn't pay attention to what I was saying on purpose rather than unintentionally	1 2 3 4 5 6

Your co-parent is cool and distant:

My co-parent's behaviour was due to something about them (e.g. the type of person they are, the mood they were in)	1 2 3 4 5 6
The reason my co-parent was cool and distant is *not* likely to change	1 2 3 4 5 6
The reason my co-parent was cool and distant is something that affects other areas of our relationship	1 2 3 4 5 6
My co-parent was cool and distant to me on purpose rather than unintentionally	1 2 3 4 5 6

Alternative specific measures of parental-relationship quality	Systemic Clinical Outcome and Routine Evalution-15
Permission	Public domain
Cost	Free
Recommended citation:	Stratton, P., Bland, J., Janes, E. & Lask, J. (2010) Developing a practicable outcome measure for systemic family therapy: The SCORE. *Journal of Family Therapy*. 32, 232-258.

Alternative specific measures of parental-relationship quality	Work and Social Adjustment Scale (WSAS)
Permission	Public domain
Cost	Free
Recommended citation:	Mundt, J.C., Marks, I.M., Shear, M.K. & Greist, J.H. The Work and Social Adjustment Scale: a simple measure of impairment in functioning. *Br J Psychiatry*. 2002 May;180:461.

Outcome	19. More parents are improving their basic skills, particularly in literacy and numeracy
Measures	Indicator: Percentage of children's centre users with low-level qualifications achieving entry, foundation and intermediate-level numeracy and literacy qualifications.
Permission	Public domain
Cost	Free

Outcome	21. More parents are accessing good work or developing the skills needed for employment, particularly those furthest away from the labour market.
Measures	Indicator: Percentage of parents from households where someone is in work Indicator: Percentage of families identified as willing/ able to work in receipt of Jobseeker's Allowance and low-income benefits. Indicator: Percentage of parents with increased 'satisfaction with allocation of time'. Indicator: Percentage of families attending and completing 'work readiness' and learning skills programmes. Indicator: Percentage of disadvantaged and all families accessing high quality, affordable early education
Permission	Public domain
Cost	Free

[1] The Wave Trust (2013) *Conception to age 2 - The age of opportunity. Addendum to the Government's vision for the Foundation Years: 'Supporting Families in the Foundation Years'*.

[2] Marmot, M. (2010) *Fair Society Healthy Lives, The Marmot Review*. Field, F. (2010) *The foundation years: Preventing poor children becoming poor adults: The report of the independent review on poverty and life chances*. Her Majesty's Government. Allen, G. (2011) *Early Intervention: The Next Steps. An Independent Report to Her Majesty's Government.* Tickell, C. (2011) *The Tickell Review - The Early Years: Foundations for life, health and learning.* Munro, E. (2011) *The Munro Review of Child Protection.* The Wave Trust (2013) *Conception to age 2 - The age of opportunity.* Addendum to the Government's vision for the Foundation Years: *'Supporting Families in the Foundation Years'*.

[3] Marmot M (2010) *Fair Society, Healthy Lives,* quoting evidence from the Department for Children Schools and Families

[4] School readiness is measured by the single simple measure of child development. Children are defined as having reached a 'good level of development' (GLD) at the end of the Early Years Foundation Stage (EYFS) through the Early Years Foundation Stage Profile (EYFSP), if they achieve at least the expected level in the early learning goals in the prime areas of learning (personal, social and emotional development; physical development, and; communication and language), and in the specific areas of mathematics and literacy.

[5] For example, see:
www.theguardian.com/politics/2013/oct/11/genetics-teaching-gove-adviser (accessed October 2013)

[6] Evaluation of Children's Centres in England (ECCE) DfE, NatCen 2009-2015. See: www.gov.uk/government/collections/evaluation-of-childrens-centres-in-england-ecce

[7] Department for Education (DfE) (2013) *Sure Start Children's Centres Statutory Guidance*.

[8] Bowers, A. & Strelitz, J. With Allen, J. & Donkin, A. (2012) *An Equal Start: Improving outcomes in Children's Centres*. UCL Institute of Health Equity.

[9] Kiernan, K. E. and Mensah, F. K. (2011) Poverty, family resources and children's early educational attainment: the mediating role of parenting. *British Educational Research Journal* 37(2) 317-336.

[10] Gutman, L., Brown, J., Akerman, R. (2009) Nurturing parenting capability: the early years. Centre for research on the wider benefits of learning. Research report 30.

[11] Gelfand & Teti (1990), Goodman, S. (1992), Murray, L. (1997), Webster-Stratton & Hammond (1988), Burbach & Borduin (1986), cited in Maggi, S., Irwin, L. J., Siddiqi, A. and Hertzman, C. (2010), The social determinants of early child development: An overview. *Journal of Paediatrics and Child Health*, 46: 627–635.

[12] See:
www.education.gov.uk/childrenandyoungpeople/earlylearningandchildcare/evidence/a0068162/effective-provision-of-pre-school-education-eppe

[13] Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2008) *The Effective Pre-School and Primary Education (EPPE 3–11) project: final report. A longitudinal study funded by the DCFS.* London: DCSF/Institute of Education, University of London.

[14] For example, Hoff, E. (2003) The specificity of environmental influence: socioeconomic status affects early vocabulary development via maternal speech. *Child Development* 74(5): 1368-1378. Dearden, L., Sibieta, L. and Sylva, K. (2011) The socioeconomic gradient in early child outcomes: evidence from the Millennium Cohort Study. *Longitudinal and Life Course Studies* 2(1): 19-40. Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2008) *The Effective Pre-School and Primary Education (EPPE 3–11) project: final report. A longitudinal study funded by the DCFS.* London: DCSF/Institute of Education, University of London.

[15] Bradley, R. H. and Corwyn, R. F. (2002) Socioeconomic status and child development. *Annual Review of Psychology.* 53:371–99.

[16] Yeung, W. J., Linver, M. R. and Brooks-Gunn, J. (2002) How money matters for young children's development: Parental investment and family processes. *Child Development* 73(6): 1861-1879

[17] Child Poverty Unit (2009) *Ending child poverty: making it happen.* Department for Children, Schools and Families

[18] Households Below Average Income, An analysis of the income distribution 1994/95 – 2011/12, Table 4.3db. Department for Work and Pensions, 2013: Available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/206778/full_hbai13.pdf

[19] Marmot, M. (2010) *Fair Society, Healthy Lives,* quoting evidence from the Department for Children Schools and Families

[20] *Ibid,* pp. 26

[21] See: Hillage, J., Uden, T., Aldridge, F., Eccles (2000) *Adult learning in England: a review.* Report 369, Institute for Employment Studies. Gregg, P. (2008) *Realising potential: A vision for personalised conditionality and support,* An Independent report to the Department for Work and Pensions

[22] DeCoulon, A., Meschi, E. and Vignoles, A. (2008) *Parents' basic skills and children cognitive outcomes.* Centre for the Economics of Education.

[23] See: Gutman, L., Brown, J., Akerman, R. (2009) *Nurturing parenting capability: the early years*. Centre for research on the wider benefits of learning. Research report 30

[24] *ibid.*

[25] Gutman, L. and Feinstein, L. (2008) *Children's well-being in primary school: pupil and school effects. Centre for research on the wider benefits of learning*. Research report 25.

[26] Evaluated using Skills for Life literacy tests and Parson & Bynner (2005) numeracy tests, cited in DeCoulon, A., Meschi, E. and Vignoles, A. (2008) *op. cit.*

[27] DeCoulon A, Meschi E and Vignoles A (2008) *op. cit.* De Coulon et al (2008) found that this result held within each parental educational group, and when controlling for a wide range of variables, including socio-professional status of the parents, income, gender of child, whether first born, number of siblings, single parenthood, parents' ability measure at age 5 and parenting style.

[28] The research bases 'good basic skills' on scores achieved on literacy and numeracy tests, such as the questions from Skills for Life and Parsons and Bynner (2005). The Moser Report (Moser, C. (1999), *A Fresh Start.* London: DfEE) identified Level 1 literacy and Entry Level 3 numeracy as the standards necessary for

adults to function at work and within society. The UK's classification of literacy and numeracy skills is broadly: Entry level is the expected level of a 7-year-old, Foundation Level 1 is the level expected of an 11-year-old (NVQ Level 1), and Intermediate Level 2 is equivalent to GCSEs A*-C (BIS (2011) *Review of research and evaluation on improving adult literacy and numeracy skills*). In 2000, QCA and DfES published the first national standards for adult literacy and numeracy. The aim of the adult literacy standard is to specify the full range of skills required for an adult to communicate and confidently apply numeracy effectively and efficiently.

[29] DeCoulon, A., Meschi, E. and Vignoles, A. (2008) *op. cit.*

[30] Hamilton, M. and Wilson, A. (eds) (2005) *New Ways of Engaging New learners: Insights from the First round of the Practitioner-Led Research Initiative.* London: NRDC.

[31] Peters *et al* (2003) cited in Vorhaus, J., Litster, J., Frearson, M. & Johnson, S. (2011) *Review of research and evaluation on improving adult literacy and numeracy skills.* Department for Business, Innovation & Skills (BIS).

[32] For example, DeCoulon A, Meschi E and Vignoles A (2008) *op. cit.*

[33] The Wave Trust (2013) *Conception to age 2 - The age of opportunity. Addendum to the Government's vision for the Foundation Years: 'Supporting Families in the Foundation Years'*.

[34] Bowers, A. & Strelitz, J. With Allen, J. & Donkin, A. (2012) *An Equal Start: Improving outcomes in Children's Centres*. UCL Institute of Health Equity.

[35] Gutman, L., Brown, J., Akerman, R. (2009) *Op. cit.* Jennings, K. D., Stagg, V. and Connors, R.E. (1991) Social networks and mothers' interactions with their preschool children, *Child Development* 62: 966-978

[36] The Wave Trust (2013) *Op. cit*.

[37] Hung, C.H. (2004). Predictors of postpartum women's health status. *Journal of Nursing Scholarship*, 36, 345–351. Corwin, E.J., Brownstead, J., Barton, N., Heckard, S., & Morin, K. (2005). The impact of fatigue on the development of postpartum depression. *Journal of Obstetric, Gynocologic, & Neonatal Nursing*, 34, 577–586

[38] Waylen, A., Stallard, N. and Stewart-Brown, S. (2008) Parenting and health in mid-childhood: a longitudinal study. *Social Psychiatry* 22: 29-36. For example, the *Growing up in Scotland* report (Marryat, L. and Martin, C. (2010) *Growing up in Scotland: Maternal mental health and its impact on child behaviour and development*) found that repeated mental health problems were identified within 24 per cent of the poorest families, compared to only 6 per cent of more affluent families.

[39] Crnic, K. A. and Greenberg, M. T. (1990) Minor parenting stresses with young children. *Child Development* 61: 1628-1627.

[40] Benasich, A.A., and Brooks-Gunn, J. (1996) Maternal attitudes and knowledge of child-rearing: Associations with family and child outcomes. *Child Development,* 67, 1186–1205.

[41] See: TCCR 'What do couple relationships have to do with children's academic achievement?', http://tccr.ac.uk/images/uploads/Couple_relationships_and_childrens_academic_achievement_-_final.pdf

[42] Taylor, L. Taske, N., Swann, C. and Waller, S. (2007) *Public health interventions to promote positive mental health and prevent mental health disorders among adults.* National Institute of Health and Clinical Evidence

[43] Action for Children (2011) *Intensive family support: the evidence*. Action for Children (2010) *The economic and social return of Action for Children's family intervention project, Northamptonshire*

[44] Kuh, D., Hardy, R., Langenberg, C., Richards, M. And Wadsworth, M. E. J. (2002) Mortality in adults aged 26–54 years related to socioeconomic conditions in childhood and adulthood: post war birth cohort study. *British Medical Journal* 325(7372): 1076-80

[45] Korenman, S., Miller, J.E. and Sjaastad, J.E. (1994) Long-term poverty and child development in the United States: Results from the NLSY. *Institute for Research on Poverty Discussion Paper* no 1044-1094. Dearden, L., Sibieta, L. and Sylva, K. (2011) The socioeconomic gradient in early child outcomes: evidence from the Millennium Cohort Study. *Longitudinal and Life Course Studies* 2(1): 19-40

[46] See: www.hscic.gov.uk/article/3442/Infant-Feeding-Survey

[47] See: https://catalogue.ic.nhs.uk/publications/public-health/smoking/stat-wome-smok-time-deli-eng-q3-12-13/stat-wome-smok-time-dele-eng-q3-12-13-rep.pdf

[48] See: NICE (2005) *Breastfeeding for longer: what works*. Porteous, R., Kaufman, K. and Rush, J. (2000) The effect of individualized professional support on duration of breastfeeding: a randomized controlled trial. *Journal of Human Lactation* 16 (4): 303-8.

[49]See: www.who.int/topics/breastfeeding/en/ and www.nhs.uk/conditions/pregnancy-and-baby/pages/why-breastfeed.aspx#close

[50] Sacker, A., Keyyly, Y., Iacovou, M., Cable, N. & Bartley, M. (2013) Breastfeeding and intergenerational social mobility: what are the mechanisms? *Arch Dis Child* 2013, 98:66671. Maggi, S., Irwin, L. J., Siddiqi, A. and Hertzman, C. (2010), The social determinants of early child development: An overview. *Journal of Paediatrics and Child Health*, 46: 627–635

[51] Hennessy, S., Green, J.M., Spiby, H. (2008) *Preview literature review: Factors which predict health and well-being outcomes for children up to the age of 5*. Mother and Infant Research Unit, University of York. Smithers, L. and McIntyre, E. (2010) The impact of breastfeeding: Translating recent evidence for practice. *Australian Family Physician* 39 (10) 757-760.

[52] NICE (2008) *A peer-support programme for women who breastfeed: Commissioning guide*.

[53] Hart, B. and Risely, T. R. (1995) *Meaningful differences in the everyday experience of young American children*. Brooks Publishing Company Inc: Baltimore.

[54]Dearden, L., Sibieta, L. and Sylva, K. (2011) The socioeconomic gradient in early child outcomes: evidence from the Millennium Cohort Study. *Longitudinal and Life Course Studies* 2(1): 19-40.

[55] Gutman, L. M., Brown, J. and Akerman, R. (2009) *Nurturing Parenting Capability: The early years*. Centre for research into the wider benefits of learning. Research report 30

[56] Christakis, N. and Fowler, J.. (2007), The Spread of Obesity in a Large Social Network Over 32 Years, *New England Journal of Medicine* 357(4): 370-379. Christakis, N., Fowler, J. (2009) *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*, Little Brown, New York.

[57] Dearden, L., Sibieta, L. and Sylva, K. (2011) *Op. cit.*

[58] Carneiro, P., Heckmann, J. (2003) *Human Capital Policy,* Working paper IZA Discussion paper series No. 821

[59] Hack, M., Flannery, D., Schluchter, M., Cartar, L., Borawski, E., and Klein, N. (2002) Outcomes in young adulthood for very-lowbirth- weight infants. *New England Journal of Medicine* 346: 149-157

[60] Music, G. (2011) *Nurturing natures: Attachment and children's emotional, sociocultural, and brain development.* Psychology Press, Hove and New York

[61] Cited in Barlow, J., Svanberg P.O. (2009). *Keeping the Baby in Mind: Infant Mental Health in Practice.* London. Routledge

[62] Hertzman, C. (2000). The case for an early childhood development strategy. *Isuma: Canadian Journal of Policy Research, 1*(2), 11-18.

[63] Evangelou, M., Sylva, K., Kyriacou, M., Wild, M. and Glenny, G. (2009) *Early years learning and development: literature revie*w. University of Oxford.

[64] Landry, S.H., and Smith, K. (2006) Responsive Parenting: Establishing Early Foundations for Social, Communication, and Independent Problem-Solving Skills, *Developmental Psychology,* 42(4): 627 - 642

[65] Olson, S. L., Bates, J. E., & Bayles, K. (1984) Mother-infant interaction and thedevelopment of individual differences in children's cognitive competence. *Developmental Psychology,* 20, 166-179.

[66] Baumrind (1991), Laursen & Collins (2009), cited in Viner, R.M., Ozer, E.M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., Currie C. (2012) Adolescence and the social determinants of health. *Lancet*, 28;379(9826): 1641-52.

[67] Fearon, R.P. Bakermans-Kranenburg, M.J., van Ijzendoorn, M.H., Lapsley, A.-M., Roisman, G.I. (2010) The significance of insecure attachment and disorganization in the development of children's externalizing behavior: a meta-analytic study. *Child Development*, 81 (2), 435–456

[68] David, T., Goouch, K., Powell, S. and Abbott, L. (2003) *Birth to three matters: A review of the literature compiled to inform the framework to support children in the earliest years.* Department for Education and Skills. Caneiro, P., Loken, K., Salvanes, K. (2010) *A flying start? Long term consequences of maternal time investments in children during their first year of life.* IZA Discussion paper No. 5362.

[69] Dearden, L., Sibieta, L. and Sylva, K. (2011) *Op. cit.*

[70] Cited in The Wave Trust (2013) *Op. cit.*

[71] Brooks-Gunn, J., Berlin, L. J., & Fuligni, A. S. (2000) Early childhood intervention programs: What about the family? In Shonkoff J.P. & Meisels S.J. (Eds.) *Handbook of early childhood intervention* (2nd ed., pp 549-588). New York: Cambridge University Press

[72] Cited in Bowers, A. & Strelitz, J. With Allen, J. & Donkin, A. (2012) *Op. cit.*

[73] Feinstein, L. and Duckworth, K. (2006) *Development in the early years: its importance for school performance and adult outcomes.* Centre on the research of the wider benefits of learning. Research report 20

[74] Chao, R. K., & Willms, J. D. (2002). The effects of parenting practices on children's outcomes. In J. D. Willms (Ed.), *Vulnerable children: Findings from Canada's National Longitudinal Survey of Children and Youth* (pp. 149-166). Edmonton, AB: University of Alberta Press

[75] Desforges and Abouchaar (2003); Feinstein et al 2004, cited in Hunt, S., Virgo, S., Klatt-Davies, Fages M., Page, A. & Apps, J. (2011) *Provider influence on the home learning environment: part 1*. The Family and Parenting Institute.

[76] Pelto, G., Dickin, K., & Engle, P. (1999). *A Critical Link, Interventions for physical growth and psychological development: A Review.* Department Of Child And Adolescent Health And Development, World Health Organization, CAH

[77] Feinstein, L. (1999) *Preschool education inequality? British children in the 1970 cohort*. London: Center for Economic Performance and University College.

[78] Feinstein, L. & Duckworth, k. (2006) *Development in the early years: its importance for school performance and adult outcomes*. Centre on the research of the wider benefits of learning. Research report 20.

[79] Bradley, R.H. and Corwyn, R.F. (2002) Socioeconomic status and child development. *Annual Review of Psychology.* 53:371–99

[80] Lindsay, G., Dockrell, J., Law, J., Roulstone, S. (2011) *Better research communication research programme: 2nd interim report.* Department for Education

[81] For example, see: Caird et al (2011); Gutman & Feinstein (2007); Lindsay et al (2011), cited in Bowers, A. & Strelitz, J. With Allen, J. & Donkin, A. (2012) *Op. cit.*

[82] Raviv, T., Kessenich, M. & Morrison, F. (2004) A mediational model of the association between socioeconomic status and three-year-old language abilities: the role of parenting factors. *Early Childhood Research Quarterly* 19: 528-547

[83] Carneiro, P., Crawford, C. and Goodman, A. (2007) *The impact of early cognitive and non-cognitive skills on later outcomes.* Centre for the Economics of Education

[84] Johnson & Kossykh (2008) *Early Years, life chances and equality: A literature review*. Frontier Economics.

[85] See Melhuish, E. (2010) *Why children, parents and home learning are important*, in Sylva, K., Melhuish, E., Sammons, P, Siraj-Blatchford, I. & Taggart B. (2010) *Early childhood Matters: Evidence from the Effective Pre-school and Primary Education project*. Routledge.

[86] Freedman, D.S., Dietz, W.H., Srinivasan, S.R. and Berenson, G.S. (1999) The relation of overweight to cardiovascular risk factors among children and adolescents: The Bogalusa heart study. *Pediatrics* 103:1175-82

[87] Department for Education (2013) *Sure Start Children's Centres Statutory Guidance*.

[88] For example, see: http://www.newstatesman.com/politics/2013/07/coalitions-cuts-early-years-education-are-storing-problems-future

[89] See: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/208960/Implementing_the_Health_Visitor_Vision.pdf; Department of Health (2009) *Healthy Child Programme: pregnancy and the first five years of life*. Department of Health.

[90] Department for Education (2013) *Op. cit.*

[91] 4Children (2013) *Sure Start Children's Centre Census 2013*.

[92] Goff, J., Hall, J., Sylva, K., Smith, T., Smith, G., Eisenstadt, N., Sammons, P., Evangelou, M., Smees, R. and Chu, K. (2013). *Evaluation of Children's Centres in England (ECCE) – Strand 3: Delivery of Family Services by Children's Centres Research Report.* DfE Research Report No. DFE-RR297. London: DfE.

[93] *ibid.*

[94] 4Children (2013) *Op. cit.*

[95] 4Children (2012) *Sure Start Children's Centre Census 2012*

[96] See: http://www.ofsted.gov.uk/inspection-reports/find-inspection-report

[97] Field, F. (2010) *The Foundation Years: Preventing Poor Children Becoming Poor Adults.*

[98] All Party Parliamentary Sure Start Group (2013) *Best Practice for a Sure Start: The Way Forward for Children's Centres*. Published by 4Children on behalf of the APPG.

[99]See: Myers & Barnes (2005) *Measuring Outcomes: guidance on outcome evaluation for sure start local programmes*. National Evaluation of Sure Start (NESS).

[100] Ofsted (2013) *The framework for children's centre inspection.*

[101] Department for Education (2012) *Statutory Framework for the Early Years Foundation Stage 2012*. London: DfE.

[102] Department of Health (2009) *Healthy Child Programme: pregnancy and the first five years of life*. London: DH.

[103] See: www.biglotteryfund.org.uk/betterstart

[104] Ofsted (2013) *Children's Centre Subsidiary Guidance: Supporting the inspection of children's centres*. London: Ofsted.

[105] Ofsted (2013) *The framework for children's centre inspection.* London: Ofsted.

[106] Ofsted (2013) *Sure Start children's centre summary self-evaluation form for a centre or group of centres*. London: Ofsted.

[107] Ofsted (2013) *The framework for children's centre inspection.* London: Ofsted.

[108] Department for Education (DfE) (2013) Sure Start Children's Centres Statutory Guidance.

[109] See: http://www.triplep.net/glo-en/home

[110] See: http://www.solihullapproachparenting.com/

[111] Goff, J., Hall, J., Sylva, K., Smith, T., Smith, G., Eisenstadt, N., Sammons, P., Evangelou, M., Smees, R. and Chu, K. (2013) *Op. cit.*

[112] Ofsted (2013) *The framework for children's centre inspection.* London: Ofsted.

[113] Department for Education and Skills (2004) *Every Child Matters: Change for Children*. London: DfES.

[114] Susan Gregory HMI, Director of Early Childhood at Ofsted, giving evidence to the APPG inquiry session on children's centres: www.4Children.org.uk/Files/76fcf1c6-3710-40c0-a665-a1e200f8f4fa/March-2013-APPG-report-FINAL.pdf

[115] *Ibid.*

[116] Children's centre practitioner, field visits 2013.

[117] Field, F. (2010) *The Foundation Years: Preventing Poor Children Becoming Poor Adults.*

[118] All Party Parliamentary Sure Start Group (2013) *Best Practice for a Sure Start: The Way Forward for Children's Centres*. Published by 4Children on behalf of the APPG.

[119] Ofsted (2013) *The framework for children's centre inspection.* London: Ofsted.

[120] La Valle, I., Gibb, J., Brzyska, B., Durbin,B., Sharp, C., Aston, H. and Rutt, S. (2011). *Feasibility study for the trials of Payment by Results for children's centres.* LGA.

[121] See: www.ons.gov.uk/ons/taxonomy/index.html?nscl=Population

[122] See: www.ons.gov.uk/ons/taxonomy/index.html?nscl=Live+Births+and+Stillbirths

[123] See: www.hscic.gov.uk/hes

[124] See: www.chimat.org.uk/default.aspx?QN=CHMT1

[125] See: www.chimat.org.uk/profiles

[126] Ofsted (2013) *The framework for children's centre inspection.* London: Ofsted.

[127] See 'Core Purpose' within: Department for Education (DfE) (2013) *Sure Start Children's Centres Statutory Guidance*.

[128] Ofsted (2013) *The framework for children's centre inspection.* London: Ofsted.

[129] Department for Education (2013) *Sure Start Children's Centres Statutory Guidance*.

[130] The EYFSP summarises and describes children's attainment at the end of the EYFS. In the new EYFSP, children are defined as having reached a good level of development (GLD) at the end of the EYFS if they achieve at least the expected level in the early learning goals in the prime areas of learning (personal, social and emotional development; physical development; and communication and language) and in the specific areas of mathematics and literacy.

[131] Numerator = Number of children achieving a 'good level of development' on the Early Years Foundation Stage Profile. Denominator = Total number of eligible pupils completing the Early Years Foundation Station Profile.

[132] The percentage gap in achievement between the lowest 20 per cent of achieving children in a local authority (mean score), and the score of the median child in the same authority expressed as a percentage of the same median score.

[133] Department for Education (2013) *Early Years Outcomes: A non-statutory guide for practitioners and inspectors to help inform understanding of child development through the early years.* Early Years Outcomes is a non-statutory guide for practitioners and inspectors to help inform understanding of child development through the early years, and as a guide to make best-fit judgements about whether a child is showing typical development for their age, maybe at risk or is ahead for their age. It was published by the DfE in September 2013. The *Early Years Outcomes* guide is a revised and updated version of previous guidance**.** It has been shaped and influenced by different antecedents and sources, including: previous frameworks; independent research, literature reviews and language assessment tools. Information provided by DfE November 2013.

[134] Early Education (2012) *Development Matters in the Early Years Foundation Stage (EYFS).*

[135] See: http://agesandstages.com/

[136] *Ibid.*

[137] DfE (2013) *Early Years Outcomes - A non-statutory guide for practitioners and inspectors to help inform understanding of child development through the early years*.

[138] Early Education (2012) Development Matters in the Early Years Foundation Stage (EYFS).

[139] Early Support (2012) *Early Years Developmental Journal*. Early Support/The Open University. Available at: www.ncb.org.uk/early-support. The *EYDJ* highlights developmental progress against the EYFS and associated early learning goals, as well as the Personal Child Health Record. Additional content was informed by validated developmental assessment tools, including ASQ.

[140] Royal College of Paediatrics and Child Health (2013) *Personal Child Health Record*. http://www.rcpch.ac.uk/PCHR

[141] The statutory requirements of the Early Years Foundation Stage Framework (EYFSF) include statutory assessments: the progress check at age two, and the assessment at the end of the Early Years Foundation Stage (EYFS) – the Early Years Foundation Stage Profile (EYFSP).

[142] DfE (2013) *Early Years Outcomes: A non-statutory guide for practitioners and inspectors to help inform understanding of child development through the early years.*

Early Education (2012) Development Matters in the Early Years Foundation Stage (EYFS).

[143]Department for Education (2012) *Statutory Framework for the Early Years Foundation Stage 2012*. London: Department for Education

[144] NB: the statutory EYFS Profile assessment that currently takes place at age 5 is currently under consultation as part of the DfE's primary assessment and accountability consultation. See: https://www.google.co.uk/search?q=department+for+work+and+pensions&ie=utf-8&oe=utf-8&rls=org.mozilla:en-US:official&client=firefox-a&gws_rd=cr&ei=-byYUp3eB-Wp7QbdtYCgBQ#q=the+parent-infant+interaction+observation+scale+and+the+healthy+child+programme&rls=org.mozilla:en-US%3Aofficial
DfE are consulting on introducing a simple baseline check at the start of reception, therefore making the EYFS Profile non-statutory, although the EYFS would remain in place

[145] See: http://agesandstages.com/

[146] See: http://agesandstages.com/

[147] Department of Health (2009) *Healthy Child Programme: pregnancy and the first five years of life*. Department of Health.

[148] http://www.foundationyears.org.uk/

[149] See: http://agesandstages.com/

[150] Department of Health (2009) *Op. cit.*

[151] For the 'Expected Level Indicators' see Appendix A: www.gov.uk/government/uploads/system/uploads/attachment_data/file/190639/DFE-RR291.pdf. A child is assigned one point for an emerging ELG, two points for an expected ELG and three points for an exceeding ELG.

[152] Such as Department for Education (2013) *Early Years Outcomes*; Early Education (2012) *Development Matters*; Early Support (2013) *Early Years Developmental Journal*.

[153] Department for Education (2012) *Statutory Framework for the Early Years Foundation Stage 2012*. London: DfE.

[154] *Ibid.*

[155] Department for Education (2013) *Early Years Outcomes*; Early Education (2012) *Development Matters*; Early Support (2013) *Early Years Developmental Journal*.

[156] 'Percentage achieving a GLD' and 'narrowing the gap'

[157] Department for Education (2013) *Early Years Outcomes*; Early Education (2012) *Development Matters*; Early Support (2013) *Early Years Developmental Journal*.

[158] See: http://agesandstages.com/

[159] *Ibid.*

[160] *Ibid.*

[161] The criteria for which is that: there are two or more published peer-reviewed studies that have demonstrated that the measure is reliable and valid. See: www.cebc4cw.org/assessment-tool/ages-and-stages-questionnaire/

[162] Squires, J., Bricker, D., & Potter, L. (1997) Revision of a parent-completed developmental screening tool: Ages and Stages Questionnaire. *Journal of Pediatric Psychology, 22(3)*, 313-328. See also: http://forms.brookespublishing.com/store/books/squires-asq/asq3-technical.pdf

[163] Squires, J., Bricker, D., & Potter, L. (1997) *Op. cit.* Skellern, C. Y., Rogers, Y., & O'Callaghan, M. J. (2001). A parent-completed developmental questionnaire: Follow-up of ex-premature infants. *Journal of Paediatrics and Child Health, 37*, 125-129. Schonhaut, L., Armijo, I., Schönstedt, M.,Alvarez, J. & Cordero, M. (2013) Validity of the Ages and Stages Questionnaires in Term and Preterm Infants *Pediatrics* 2013;131

[164] See: http://agesandstages.com/

[165] For more information see: www.education.gov.uk/childrenandyoungpeople/earlylearningandchildcare/a00214734/integrated-review-faqs

[166] Report of the pilot due for release 2014.

[167] See: www.gov.uk/government/organisations/department-for-education/series/statistics-early-years-foundation-stage-profile

[168] See: www.education.gov.uk/inyourarea/results/nat_921_las_9.shtml

[169] Schonhaut, L., Armijo, I., Schönstedt, M.,Alvarez, J. & Cordero, M. (2013) Validity of the Ages and Stages Questionnaires in Term and Preterm Infants *Pediatrics* 2013;131; Skellern, C. Y., Rogers, Y., & O'Callaghan, M. J. (2001). A parent-completed developmental questionnaire: Follow-up of ex-premature infants. *Journal of Paediatrics and Child Health, 37*, 125-129.

[170] See: Cotzias, E. Whitehorn, T. & STA Teacher Assessment & Moderation Team (2013) *Topic Note: Results of the Early Years Foundation Stage Profile* (EYFSP). Department for Education

[171] Schonhaut, L., Armijo, I., Schönstedt, M.,Alvarez, J. & Cordero, M. (2013) *Op. cit*. And: Skellern, C. Y., Rogers, Y., & O'Callaghan, M. J. (2001) *Op. cit.*

[172] Squires, J., Bricker, D., & Potter, L. (1997). Revision of a parent-completed developmental screening tool: Ages and Stages Questionnaire. *Journal of Pediatric Psychology, 22(3)*, 313-328

[173] Skellern, C. Y., Rogers, Y., & O'Callaghan, M. J. (2001). *Op. cit.*

[174] Department for Education (2012) *Statutory Framework for the Early Years Foundation Stage 2012*. London: DfE.

[175] Department for Education (2013) *Early Years Outcomes - A non-statutory guide for practitioners and inspectors to help inform understanding of child development through the early years*.

[176] Early Education (2012) *Op. cit.*

[177] Early Support (2012) *Op. cit.*

[178] Narrowing the gap between the lowest achieving 20% in the EYFSP and all children. For further information, see the corresponding technical report.

[179] Department of Health (2009) *Healthy Child Programme: pregnancy and the first five years of life*. Department of Health.

[180] For more information see: www.education.gov.uk/childrenandyoungpeople/earlylearningandchildcare/a00214734/integrated-review-faqs

[181] One of the statutory assessments of the EYFS Framework.

[182] Department of Health (2009) *Healthy Child Programme: pregnancy and the first five years of life*. Department of Health.
[183] The Wave Trust (2013) *Op. cit.*
[184] See: www.biglotteryfund.org.uk/betterstart
[185]Department of Health. www.gov.uk/government/publications/healthy-lives-healthy-people-improving-outcomes-and-supporting-transparency
[186] See: www.ons.gov.uk/ons/taxonomy/index.html?nscl=Child+Mortality
[187] See: www.chimat.org.uk/resource/item.aspx?RID=88012
[188] Release: Characteristics of Birth 1, England & Wales. Available at: www.ons.gov.uk/ons/rel/vsob1/characteristics-of-birth-1--england-and-wales/2012/index.html
[189] The Poverty Site. See: http://www.poverty.org.uk/20/index.shtml?2
[190]Department of Health. www.gov.uk/government/publications/healthy-lives-healthy-people-improving-outcomes-and-supporting-transparency
[191] See: www.ons.gov.uk/ons/taxonomy/index.html?nscl=Child+Mortality
[192] See: www.chimat.org.uk/
[193] See: www.hscic.gov.uk/ncmp
[194] *Ibid.*
[195] *Ibid.*
[196] See: www.hscic.gov.uk/searchcatalogue?productid=10135&q=title%3a%22national+child+measurement+programme%22&sort=Relevance&size=10&page=1#top
[197] See: www.hscic.gov.uk/ncmp
[198] See: http://guidance.nice.org.uk/PHG/69
[199] NICE (2010) *Quitting Smoking in Pregnancy and following Childbirth Commissioning Guide.* Available at: www.nice.org.uk/media/0A3/EB/QSIPCommissioning_guide.pdf
[200] See: http://www.nice.org.uk/newsroom/features/BehindTheHeadlinesWillAllPregnantWomenBeBreathalysedForSmoking.jsp?textonly=true
[201] See: www.hscic.gov.uk/catalogue/PUB11039
[202] See: www.data.gov.uk/dataset/infant-feeding-survey-2010
[203] NICE (2010) *Op. cit.*
[204] See: www.hscic.gov.uk/datacollections/ssatod
[205] See: www.data.gov.uk/dataset/infant-feeding-survey-2010
[206] See: www.hscic.gov.uk/datacollections/ssatodand the ChiMat website under the theme 'pregnancy and early years'
[207] See: www.nice.org.uk/usingguidance/commissioningguides/quittingsmokinginpregnancy/CommissioningToolQSIP.jsp?domedia=1&mid=A2737D61-19B9-E0B5-D438834E7CCF8EE2
[208] See: www.gov.uk/government/uploads/system/uploads/attachment_data/file/213757/dh_124960.pdf
[209] See: www.hscic.gov.uk/catalogue/PUB11039

[210] Smoking status at time of delivery: www.phoutcomes.info/

[211] Quote: Children's centre user

[212] Quote: Children's centre user

[213] Quote: Children's centre area manager

[214] See: www.unicef.org.uk/babyfriendly/

[215] *Ibid.*

[216] Flaherman, V., Chien, A., McCulloch, C., Dudley, R. (2011) Breastfeeding rates differ significantly by method used: a cause for concern for public health measurement. Breastfeed Med. 2011 Feb, 6(1): 31-5

[217] As part of the Healthy Child Programme.

[218] NICE (2006) *Routine Postnatal Care of Women and their Babies*. NICE Clinical Guide 37.

[219] See: www.data.gov.uk/dataset/infant-feeding-survey-2010

[220] See: www.gov.uk/government/uploads/system/uploads/attachment_data/file/208240/Breastfeeding_initiation_and_prevalence_at_6_to_8_weeks_2012-13_Q4.xls

[221] See: www.gov.uk/government/uploads/system/uploads/attachment_data/file/208240/Breastfeeding_initiation_and_prevalence_at_6_to_8_weeks_2012-13_Q4.xls

[222] Findings from the latest Infant Feeding Survey: Health and Social Care Information Centre (2012) Infant Feeding Summary 2010, Summary. Available from: www.nct.org.uk/sites/default/files/related_documents/Infant%20Feeding%20Survey_uk_2010_summary.pdf

[223] www.gov.uk/government/uploads/system/uploads/attachment_data/file/208240/Breastfeeding_initiation_and_prevalence_at_6_to_8_weeks_2012-13_Q4.xls

[224] NICE (2008) A peer-support programme for women who breastfeed: Commissioning guide. Available at: www.nice.org.uk/media/63D/7B/BreastfeedingCommissioningGuide.pdf

[225] Available from: www.nice.org.uk/media/DFC/36/Peer_support_programme_for_women_who_breastfeed_-_Commissioning_and_benchmarking_tool.xls

[226] Department of Health (2012) *Improving outcomes and supporting transparency*. Available at: www.rcpsych.ac.uk/pdf/The%20Public%20Health%20Outcomes%20Framework.pdf

[227] Department of Health (2009) *Healthy Child Programme: pregnancy and the first five years of life*. Department of Health.

[228] See:www.unicef.org.uk/babyfriendly/

[229] See: Melhuish, E., Phan, M., Sylva, K., Sammons, P., Siraj-Blatchford, I. & Taggart, B. (2008) Effects of the Home Learning Environment and Preschool Center Experience upon Literacy and Numeracy Development in Early Primary School, *Journal of Social Issues, Vol. 64, No. 1, 2008, pp. 95--114*

[230] Comfort M, Gordon PR, Naples D (2011) KIPS: An evidence-based tool for assessing parenting strengths and needs in diverse families. *Infants & Young Children* 24(1), 56-74. And: Comfort M, Gordon PR, Naples D (2011) KIPS: An evidence-based tool for assessing parenting strengths and needs in diverse families. *Infants & Young Children* 24(1), 56-74.

[231] Department for Education (2012) *Statutory Framework for the Early Years Foundation Stage 2012*. London: DfE.

[232] Early Education (2012) *Op. cit.*

[233] Early Support (2012) *Op. cit.*

[234] Comfort, M., Gordon, P.R., Naples, D. (2011) KIPS: An evidence-based tool for assessing parenting strengths and needs in diverse families. *Infants & Young Children* 24(1), 56-74. And: Comfort, M., Gordon, P.R., Naples, D. (2011) KIPS: An evidence-based tool for assessing parenting strengths and needs in diverse families. *Infants & Young Children* 24(1), 56-74.

[235] Hunt, S., Virgo, S., Klatt-Davies, fages M., Page, A. & Apps, J. (2011) *Provider influence on the home learning environment: part 1*. The Family and Parenting Institute.

[236] See: Melhuish, E., Phan, M., Sylva, K., Sammons, P., Siraj-Blatchford, I. & Taggart, B. (2008) Effects of the Home Learning Environment and Preschool Center Experience upon Literacy and Numeracy Development in Early Primary School, *Journal of Social Issues, Vol. 64, No. 1, 2008, pp. 95--114*

[237] Hunt, S., Virgo, S., Klatt-Davies, M., Page, A. & Apps, J. (2011) *Op. cit.*

[238] Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2008) *The Effective Pre-School and Primary Education (EPPE 3–11) project: final report. A longitudinal study funded by the DCFS.* London: DCSF/Institute of Education, University of London.

[239] Sammons et al (2008) Effective pre-school and primary education 3-11 project (EPPE 3-11) *The influence of school and teaching quality on children's progress in primary schools*. DCSF.

[240] See: www.cls.ioe.ac.uk/page.aspx?&sitesectionid=851&sitesectiontitle=Welcome+to+the+Millennium+Cohort+Study

[241] National Evaluation of Sure Starts (NESS). See: http://www.ness.bbk.ac.uk/

[242] See: www.education.gov.uk/childrenandyoungpeople/earlylearningandchildcare/evidence/a0068162/effective-provision-of-pre-school-education-eppe

[243] See: Hunt, S., Virgo, S., Klatt-Davies, M., Page, A. & Apps, J. (2011) *Op. cit.*

[244] Mendelsohn, A.L., Dreyer, B.P., Tamis-LeMonda, C.S., Ahuja, P. (1999) Validity of StimQ, a scale for assessing the cognitive home environment. *Journal of Developmental & Behavioral Pediatrics* 20 (5), 399.

[245] Comfort, M., & Gordon, P. R. (2006). The Keys to Interactive Parenting Scale (KIPS): A practical observational assessment of parenting behavior. *NHSA Dialog: A Research-to-Practice Journal for the Early Intervention Field, 9(1)*, 22-48. And: Comfort M, Gordon PR, Naples D (2011) *Op. cit.*

[246] The criteria for which is that there are two or more published peer-reviewed studies that have demonstrated that the measure is reliable and valid. See: www.cebc4cw.org/assessment-tool/keys-to-interactive-parenting-scale/.

[247] The Wave Trust (2013) *Op. cit.*

[248] See: www.cebc4cw.org/assessment-tool/keys-to-interactive-parenting-scale/

[249] Comfort, M., Gordon, P.R., Naples, D. (2011) *Op. cit.*

[250] Comfort, M., & Gordon, P. R. (2006) *Op. cit.*

[251] Comfort, M., Gordon, P. R., & Naples, D. (2011) *Op. cit.*

[252] Comfort, M., Gordon, P. R., & Naples, D. (2011) *Ibid.*

[253] Comfort, M., Gordon, P. R., & Naples, D. (2011) *Ibid.*

[254] Arnold, D.S., O'Leary, S.G., Wolff, L.S. & Acker, M.M. (1993) The Parenting Scale: A measure of dysfunctional parenting in discipline situations. *Psychological Assessment*, 5, 137–144.

[255] Rhoades, K. & O'Leary, S. (2007) Factor Structure and Validity of the Parenting Scale, *Journal of Clinical Child and Adolescent Psychology*, Vol 36(2): 137-146.

[256] Arnold, D.S., O'Leary, S.G., Wolff, L.S. & Acker, M.M. (1993) *Op. cit.*

[257] Rhoades, K. & O'Leary, S. (2007) *Op. cit.*

[258] Arnold, D.S., O'Leary, S.G., Wolff, L.S. & Acker, M.M. (1993) *Op. cit.*

[259] Rhoades, K. & O'Leary, S. (2007) *Op. cit.*

[260] Simkiss, D., MacCallum, F., Fan, E., Oates, J., Kimani, P. and Stewart-Brown, S. (2013) Validation of the mothers object relations scales in 2–4 year old children and comparison with the child–parent relationship scale, *Health and Quality of Life Outcomes* 2013, 11:49

[261] Simkiss, D., MacCallum, F., Fan, E., Oates, J., Kimani, P. and Stewart-Brown, S. (2013) *Ibid.*

[262] Črnčec, R., Barnett, B., & Matthey, S. (2008). Karitane Parenting Confidence Scale: Manual. Sydney South West Area Health Service. Sydney: Australia.

[263] See: *Ibid.*

[264] Svanberg, P.O., Barlow, J. & Tigbe, W. (2013) The Parent-Infant Interaction Observation Scale: Reliability and validity of a screening tool, *Journal of Reproductive and Infant Psychology*, Vol. 31(1):5-14

[265] Svanberg, P.O. & Barlow, J. (2013) The effectiveness of training in the Parent-Infant Interaction Observation Scale for health visitors*, Journal of Health Visiting*, Vol. 1(3):162-166

[266] Svanberg, P.O., Barlow, J. & Tigbe, W. (2013) The Parent-Infant Interaction Observation Scale: Reliability and validity of a screening tool, *Journal of Reproductive and Infant Psychology*, Vol. 31(1):5-14; Svanberg, P.O. & Barlow, J. (2013) The effectiveness of training in the Parent-Infant Interaction Observation Scale for health visitors*, Journal of Health Visiting*, Vol. 1(3):162-166.

[267] Comfort, M., & Gordon, P. R. (2006) *Op. cit*

[268] See: http://comfortconsults.com/Portals/194074/docs/kips%20validation%20studies%20funded%20by%20nichd%201-2011.pdf

[269] Melhuish, E., Phan, M., Sylva, K., Sammons, P., Siraj-Blatchford, I. & Taggart, B. (2008) Effects of the Home Learning Environment and Preschool Center Experience upon Literacy and Numeracy Development in Early Primary School, *Journal of Social Issues, Vol. 64, No. 1, 2008, pp. 95—114*

[270] A residual score is the deviation of a case from the regression line i.e. from its predicted value.

[271] Department of Health (2009) *Healthy Child Programme: pregnancy and the first five years of life*. Department of Health.

[272] Tickell, C. (2011) *The Early Years Foundation Stage (EYFS) Review – Report on the Evidence.*

[273]See: Department for Education (2013) *Early Years Foundation Stage Profile Handbook 2014*. See: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/194179/Early_Years_Foundation_Stage_Profile_Handbook.pdf

[274]Department for Education (2012) *Statutory Framework for the Early Years Foundation Stage 2012*. London: DfE.

[275]Early Education (2012) *Development Matters in the Early Years Foundation Stage* (EYFS). NB: Although this is currently missing from the *Early Years Outcomes* non-statutory guidelines.

[276]Early Support (2012) *Early Years Developmental Journal*. Early Support/The Open University. See: www.ncb.org.uk/early-support

[277] Children and Young People's Health Outcomes Strategy (2012) *Report of the Children and Young People's Health Outcomes Forum*.

[278] The Wave Trust (2013) *Op. cit*.

[279] Goldberg, D.P. (1978) *Manual of the General Health Questionnaire. Windsor, England: NFER Publishing.* And: Goldberg, D. & Williams, P. (1988) *A users guide to the General Health Questionnaire*. Slough: NFER Nelson

[280] Kroenke, K., Spitzer, R. L., Williams, J. B. (2001) The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16(9): 606-613.
And see: http://www.iapt.nhs.uk/equalities/translations/

[281] Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985) The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*, 71-75. See also: OECD (2011) *How's Life: Measuring Well-being* Available at: www.oecd.org/statistics/howslife.htm and OECD (2013) OECD Guidelines on Measuring Subjective Well-being, *OECD Publishing*, available at: www.oecd.org/statistics/Guidelines%20on%20Measuring%20Subjective%20Well-being.pdf

[282] Watson, D., Clark, L. A., & Tellegan, A. (1988) Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. See also: OECD (2011) *How's Life: Measuring Well-being.* Available at: www.oecd.org/statistics/howslife.htm and OECD (2013) OECD Guidelines on Measuring Subjective Well-being, *OECD Publishing*, available at: www.oecd.org/statistics/Guidelines%20on%20Measuring%20Subjective%20Well-being.pdf

[283] Children's centre user.

[284] Children's centre manager.

[285] The Wave Trust (2013) *Op. cit.*

[286] Department for Education (2011) *Supporting Families in the Foundation Years*. London: DfE.

[287] For further information, see: www.pearsonclinical.co.uk/Psychology/ChildMentalHealth/ChildParenting/WorkinginPartnership/WorkinginPartnership.aspx

[288] The Wave Trust (2013) *Op. cit.*

[289] Goldberg, D.P. (1978) *Manual of the General Health Questionnaire. Windsor, England: NFER Publishing.* And: Goldberg, D. & Williams, P. (1988) *A users guide to the General Health Questionnaire*. Slough: NFER Nelson

[290] See: Boyd, R. C., Le, H. N., & Somberg, R. (2005) Review of screening instruments for postpartum depression. *Archives of Women's Mental Health, 8,* 141-153.

[291] Goldberg, D. & Huxley, P. (1980) *Mental Illness in the community: The pathway to psychiatric care.* London: Tavistock Publications. Goldberg, D. (1985) Identifying psychiatric illnesses among general medical patients. *British Medical Journal*, 291: 161-162.

[292] Goldberg, D.P. (1978) *Manual of the General Health Questionnaire.* Windsor, England: NFER Publishing. And: Goldberg, D. & Williams, P. (1988) *Op. cit.*

[293] See: www.hscic.gov.uk/article/2021/Website-Search?productid=11988&q=HEALTH+SURVEY+FOR+ENGLAND&sort=Relevance&size=10&page=1&area=both#top

[294] See: Boyd, R. C., Le, H. N., & Somberg, R. (2005) Review of screening instruments for postpartum depression. *Archives of Women's Mental Health, 8,* 141-153

[295] *Ibid.*

[296] Kroenke, K., Spitzer, R. L., Williams, J. B. (2001) The PHQ-9: validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16(9): 606-613.
And see: http://www.iapt.nhs.uk/equalities/translations/

[297] See: Boyd, R. C., Le, H. N., & Somberg, R. (2005) *Op. cit.*

[298] *Ibid.*

[299] Zigmond, A.S., Snaith, R.P. (1983) The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica* 67, 361–370.

[300] Cox, J. L., Holden, J. M. & Sagovsky, R. (1987) Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry,* 150*,* 782 -*786*

[301] For further information see: See: Boyd, R. C., Le, H. N., & Somberg, R. (2005) *Op. cit.*

[302] Cox, J. L., Holden, J. M. & Sagovsky, R. (1987) Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry,* 150*,* 782 -*786*

[303] Razurel, C., Kaiser, B., Dapuis, M., Antonietti, J., Citherlet, C., Epiney, M. & Selleret, C. (2013) Validation of the Antenatal Perceived Stress Index. *Journal of Health Psychology,* 0(0): 1-11

[304] Razurel, C., Kaiser, b., Dupuis, M., Antonietti, J., Sellenet, C. & Epiney, M. (2013) Validation of the post-delivery perceived stress inventory, *Psychology, Health and Medicine*

[305] For further information, contact the corresponding author:
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[306] OECD (2011) *How's Life: Measuring Well-being.* Available at: www.oecd.org/statistics/howslife.htm

[307] OECD (2013) OECD Guidelines on Measuring Subjective Well-being, OECD Publishing, available at: www.oecd.org/statistics/Guidelines%20on%20Measuring%20Subjective%20Well-being.pdf

[308] Developed by the pioneering social researcher Dr. Hadley Cantril

[309] OECD (2011) *Op. cit.*

[310] For example, Rassler and Riphahn (2006) cited in OECD (2011) *Op. cit.*

[311] For example, Krueger and Schkade (2007) and Rassler and Riphahn (2006), cited in OECD (2011) *Op. cit.*

[312] For example, Diener and Tov (2005) cited in OECD (2011) *Op. cit.*

[313] Steptoe, A., Wardle, J. and Marmot, M. (2005) Positive affect and health-related neuroendocrine, cardiovascular, and inflammatory processes, *Proceedings of the National Academy of Sciences of the*

United States of America, Vol. 102(18), pp. 6508-6512 cited in OECD (2011) *Op. cit.*

[314] Diener and Tov (2005) cited in in OECD (2011) *Op. cit.*

[315] OECD (2011) *Op. cit.*

[316] Cited in: OECD (2013) OECD Guidelines on Measuring Subjective Well-being, *OECD Publishing*, available. See also: Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985) The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*, 71-75. Pavot, W. G., Diener, E., Colvin, C. R., & Sandvik, E. (1991) Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment,* 57, 149-161. Pavot, W., & Diener, E. (1993) Review of the Satisfaction with Life Scale. *Psychological Assessment*, *5*, 164-172. Pavot, W., & Diener, E. (2008) The Satisfaction With Life Scale and the emerging construct of life satisfaction. *Journal of Positive Psychology*, *3*, 137–152.

[317] Watson, D., Clark, L. A., & Tellegan, A. (1988) Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070

[318] See: www.worldvaluessurvey.org/

[319] See: www.europeansocialsurvey.org/

[320] See: www.eui.eu/Research/Library/ResearchGuides/Economics/Statistics/DataPortal/GSOEP.aspx

[321] See: www.iser.essex.ac.uk/bhps

[322] See: www5.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=89F0115X&CHROPG=1&lang=eng

[323]See: www.gallup.com/strategicconsulting/en-us/worldpoll.aspx

[324]See: www.europeansocialsurvey.org/

[325]OECD (2013) OECD Guidelines on Measuring Subjective Well-being, *OECD Publishing*, www.oecd.org/statistics/Guidelines%20on%20Measuring%20Subjective%20Well-being.pdf

[326] Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985) The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*, 71-75; See also: OECD (2011) *Op. cit.* and OECD (2013) *Op. cit.*

[327] Pavot, W. and E. Diener (1993) Review of the Satisfaction with Life Scale, *Psychological Assessment*, Vol. 5, No. 2, pp. 164-172.

[328] Watson, D., Clark, L. A., & Tellegan, A. (1988) Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. See also: OECD (2011) *Op. cit.* and OECD (2013) *Op. cit.*

[329] OECD (2013) *Op. cit.*

[330] Department of Health (2009) *Healthy Child Programme: pregnancy and the first five years of life*. Department of Health.

[*331*] *Ibid.*

[332] Department for Education (DfE) (2013) *Sure Start Children's Centres Statutory Guidance*.

[333] NICE (2012) *Social and emotional well-being: early years*. NICE Public Health Guidance 40.

[334] Department of Health (2011) *No Health without Mental Health: A cross-government mental health outcomes strategy for people of all ages*.

[335] Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *52*, 30–41.

[336]Further information on measures of the parents' couple relationship can be found in the technical report.

[337] For example, see: Baheiraei, A., Mirghafourvand, M., Mohammad, E., Mohammad-Alizadeh Charandabi, S. & Nedjat, S. (2012) Social support for women of reproductive age and its predictors: a population-based study, *BMC Women's Health* 2012, 12:30; Searson, I., Sarason, B., Potter, E. & Antoni, M. (1985) Life events, social support and illness, *Psychosomatic Medicine*, 47: 156-163. The Office for National Statistics (ONS), in their study of National Wellbeing, also use three simple indicators of perceived social support: overall satisfaction with family life; overall satisfaction with their social life, and; whether people have a spouse family member or friend to rely on if they have a serious problem.

[338] Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *52*, 30–41.

[339] Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *52*, 30–41.; Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990). Psychometric characteristics of the Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, *55*, 610–617

[340] Osman, A., Lamis, D., Freedenthal, S., Gutierrez, P. & McNaughton-Cassill, M. (2013) The Multidimensional Scale of Perceived Social Support: Analyses of Internal Reliability, Measurement Invariance, and Correlates Across Gender, *Journal of Personality Assessment*, DOI:
10.1080/00223891.2013.838170

[341] Osman, A., Lamis, D., Freedenthal, S., Gutierrez, P. & McNaughton-Cassill, M. (2013) The Multidimensional Scale of Perceived Social Support: Analyses of Internal Reliability, Measurement Invariance, and Correlates Across Gender, *Journal of Personality Assessment*, DOI:
10.1080/00223891.2013.838170

[342] Osman, A., Lamis, D., Freedenthal, S., Gutierrez, P. & McNaughton-Cassill, M. (2013) The Multidimensional Scale of Perceived Social Support: Analyses of Internal Reliability, Measurement Invariance, and Correlates Across Gender, *Journal of Personality Assessment*, DOI:
10.1080/00223891.2013.838170

[343] See: TCCR What do couple relationships have to do with children's academic achievement: http://tccr.ac.uk/images/uploads/Couple_relationships_and_childrens_academic_achievement_-_final.pdf

[344] Relationship Attribution Measure (RAM)
Fincham F and Bradbury T. Assessing attributions in marriage: The Relationship Attribution Measure. *Journal of Personality and Social Psychology*, Vol 62(3), Mar 1992, 457-468

[345] Systemic Clinical Outcome and Routine Evaluation-15 (SCORE-15)
Stratton, P, Bland, J., Janes, E & Lask, J. (2010) Developing a practicable outcome measure for systemic family therapy: The SCORE. *Journal of Family Therapy*. 32, 232-258.

[346] Work and Social Adjustment Scale (WSAS) Mundt JC, Marks IM, Shear MK, Greist JH. The Work and Social Adjustment Scale: a simple measure of impairment in functioning. *Br J Psychiatry*. 2002 May;180:461.

[347] Gutman & Feinstein (2008) Children's Well-being in Primary School: Pupil and School Effects. Wider Benefits of Learning Research Report No.25

[348] See: http://www.ucas.com/sites/default/files/international-quals-2013.pdf.

[349] For example: http://www.kpmgcareers.co.uk/graduates/how-to-apply/international-students#.UhYJnfk8X9q and http://mycareer.deloitte.com/uk/en/university/apply-now/academic-requirements/international-academic-requirements.

[350] i.e. De Coulon et al (2008); Hamilton & Wilson (2005); Peters et al (2003) cited in Vorhaus, J., Litster, J., Frearson, M. & Johnson, S. (2011) *Review of research and evaluation on improving adult literacy and numeracy skills.* Department for Business, Innovation & Skills (BIS

[351] Department for Business, Innovation & Skills (BIS) (2012): The 2011 Skills for Life Survey: A Survey of Literacy, Numeracy and ICT Levels in England.

[352] Parsons, S. and Bynner, J. Measuring basic skills for longitudinal study (2005).London: NRDC.

[353] Moser, C. (1999) *A Fresh Start*. London: DfEE

[354] Vorhaus, J., Litster, J., Frearson, M. & Johnson, S. (2011) *Review of research and evaluation on improving adult literacy and numeracy skills.* Department for Business, Innovation & Skills (BIS).

[355] QCA (2005) *National Standards for Adult Literacy, Numeracy and ICT*. QCA, DfES, Basic Skills Agency

[356] De Coulon, A., Meschi, E. & Vignoles, A. (2008) *Parents' basic skills and children's cognitive outcomes.* Centre for the Economics of Education.

[357] Wilson, A. & Hamilton, M. (Eds.) (2005) *New ways of engaging new learners: lessons from round one of the practitioner-led research initiative.* London: National Research and Development Centre for Adult Literacy and Numeracy.
[358] Peters et al (2003) cited in Vorhaus, J., Litster, J., Frearson, M. & Johnson, S. (2011) *Review of research and evaluation on improving adult literacy and numeracy skills.* Department for Business, Innovation & Skills (BIS).
[359] De Coulon, A., Meschi, E. & Vignoles, A. (2008) *Parents' basic skills and children's cognitive outcomes.* Centre for the Economics of Education.
[360] See: https://www.gov.uk/government/publications/2011-skills-for-life-survey
[361] See: https://www.gov.uk/government/publications/2011-skills-for-life-survey
[362] Ofsted (2013) *The framework for children's centre inspection.*
[363] Department for Education (DfE) (2013) *Sure Start Children's Centres Statutory Guidance*.
[364] Department for Business, Innovation & Skills (2011) *The Plan for Growth*.
[365] See: http://skillsfundingagency.bis.gov.uk/news/pressreleases/Doubling_Funding_Rates_for_English_and_Maths_Qualifications.htm
[366] Matheas, S., Singler, R. & Karemaker, A. (2012) Improving Quality in the Early Years: A comparison of perspectives and measures.
[367] Hopkin, R., Stokes, L., & Wilkinson, D. (2010). Quality, Outcomes and Costs in Early Years Education. Report to the Office for National Statistics. London: National Institute of Economic and Social Research.
[368] Matheas, S., Singler, R. & Karemaker, A. (2012) Improving Quality in the Early Years: A comparison of perspectives and measures.
[369] I.e. ECOTEC 1998; Dewson, Eccles et al 2000; WEFO 2003; Lloyd & Sullivan 2004, cited in Blades, R., Fauth, B. and Gibb, J. (2012) *Measuring employability skills: A rapid review to inform development of tools for project evaluation*. London: NCB.
[370] See: http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec--rebased-on-soc2010--user-manual/index.html
[371] OECD (2011) *How's Life: Measuring Well-being* Available at: http://www.oecd.org/statistics/howslife.htm
[372] OECD (2011) *How's Life: Measuring Well-being* Available at: http://www.oecd.org/statistics/howslife.htm
[373] See: http://www.eurofound.europa.eu/areas/qualityoflife/eqls/
[374] Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart. B. (2004). The Effective Provision of Pre-School Education (EPPE Project). Technical Paper 12. London: Department for Education / Institute of Education, University of London.

[375] See: https://www.gov.uk/dwp
[376] See: www.chimat.org.uk
[377]See: https://www.gov.uk/government/organisations/department-for-communities-and-local-government/series/homelessness-statistics
[378] See: https://www.gov.uk/government/organisations/department-for-education/series/statistics-childcare-and-early-year
[379] Blades, R., Fauth, B. and Gibb, J. (2012) *Measuring employability skills: A rapid review to inform development of tools for project evaluation*. London: NCB
[380] All Party Parliamentary Sure Start Group (2013) *Best Practice for a Sure Start: The Way Forward for Children's Centres*. Published by 4Children on behalf of the APPG.
[381] See: http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Labour+Market
[382] Department for Education (2011) *Supporting Families in the Foundation Years*. London: DfE.
[383] Department for Education (DfE) (2013) *Sure Start Children's Centres Statutory Guidance*.
[384] Marangozov, R & Stevens, H. (2011) *Work-focused services in children's centres pilot: Final Report*. DWP.
[385] Ofsted (2013) *The framework for children's centre inspection.*
[386] See: https://www.gov.uk/government/policies/helping-troubled-families-turn-their-lives-around
[387] All Party Parliamentary Sure Start Group (2013) *Best Practice for a Sure Start: The Way Forward for Children's Centres*. Published by 4Children on behalf of the APPG.
[388] Department for Education (DfE) (2013) *Sure Start Children's Centres Statutory Guidance*.
[389] As cited in: Field, F. (2010) *The Foundation Years: Preventing Poor Children Becoming Poor Adults.*
[390] See: http://www.outcomesstar.org.uk/
[391] See: http://soulrecord.org/home
[392] Dickens, G., Weleminsky, J., Onifade, Y., Sugarman, P. (2012) Recovery Star: validating user recovery, *The Psychiatrist*, 36, 45-50. And: Killaspy, H., White, S. and King, M. (2012) Psychometric properties of the Mental Health Recovery Star, *British Journal of Psychiatry*, 201: 65- 70
[393] Quote: Children's centre manager, field visits 2013
[394] Department for Education (DfE) (2013) *Sure Start Children's Centres Statutory Guidance*.
[395] All Party Parliamentary Sure Start Group (2013) *Best Practice for a Sure Start: The Way Forward for Children's Centres*. Published by 4Children on behalf of the APPG.

[396] NICE (2010) *Quitting Smoking in Pregnancy and following Childbirth Commissioning Guide.* Available at: http://www.nice.org.uk/media/0A3/EB/QSIPCommissioning_guide.pdf

[397] The British Psychological Society and The Royal College of Psychiatrists (2007) *Antenatal and postnatal mental health: The NICE guidelines on clinical management and service guidance*. Available at: http://www.nice.org.uk/nicemedia/live/11004/30433/30433.pdf

[398] Royal College of Paediatrics and Child Health (2013) *Personal Child Health Record*. http://www.rcpch.ac.uk/PCHR

[399] Department for Education (DfE) (2013) *Sure Start Children's Centres Statutory Guidance.*