



REDUCING INEQUALITIES IN THE EARLY YEARS

A rapid evidence review to inform LEAP's next five years

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Executive summary

This rapid evidence review was commissioned by the Lambeth Early Action Partnership (LEAP), an initiative which aims to reduce inequalities in the early years. LEAP is supported by the National Lottery Community Fund, as part of the A Better Start programme. The review was commissioned to inform revisions of the LEAP programme- and service-level theory of change, shared measurement framework and evaluation.

Aims of the study and methodology

LEAP uses a place-based, collective-impact framework and approach to achieve its ultimate goals. This means that LEAP brings together people and organisations to share information and work in mutually reinforcing ways to meet the unique needs of local children and families. LEAP aims to achieve place-based collective impact on: improving young children's diet and nutrition; developing their social, emotional, language and communication skills; and reducing inequalities.

The aim of the review was to synthesise the evidence on:

- What factors influence children's development in the early years.
- What works to support children's development in the early years.
- The challenges and strengths of the whole-system place-based approach to bring about transformational, sustainable and long-term improvements.

The review has focused on the English language literature from high-income countries, published between 2010 and 2019. It is primarily based on evidence from the 31 data sources (e.g. reports, articles) selected for the relevance and methodological robustness of their findings.

There were limited resources available for the review, while the study covered two broad topics (i.e. 'what matters and what works' in the early years, and place-based approaches), which required separate search strategies, screening and evidence sources. In order to achieve this breadth, the depth of the study had to be sacrificed, with findings mainly presenting a broad picture rather than a detailed and granular analysis.

Below, we first summarise the evidence and learning for LEAP on the key determinants of early childhood development identified in the literature. We then present the findings on place-based approaches and learning for LEAP.

The parent–child relationship

- How parents interact with their child in the early years has a direct influence on children's learning, cognitive and non-cognitive skills, and social and emotional development, all of which give young children foundations on which to thrive. Therefore, having a strong parent–child relationship should be a key outcome for LEAP's programme-level and relevant service-level theories of change.
- The evidence suggests that there is merit in intervening early to support parents in understanding the importance of the quality of their interactions with their children and to ensure that services support the development of this relationship. Some disadvantaged parents may be particularly likely to benefit from this support.
- The evidence on what works suggests that as well as universal information and group-based programmes, a range of targeted interventions are required to support families with specific and high-level needs. The theory of change of the LEAP programme and of relevant services should therefore indicate how parents with these needs are identified and offered appropriate support.
- The evidence does not explore differences between mothers and fathers in terms of the impact of the parent–child relationship on children's early development. While it is not usually clear if the evidence relates to

mothers and/or fathers, it is likely to be mainly about the former. LEAP could consider building an evidence base on fathers: how the relationship with their child is important and what can be done to support it.

The home learning environment

- The quality of the home learning environment in the early years (i.e. opportunities children have to learn from their parents) *can* have more impact on children's wellbeing and achievement than any other factor, including parental education and family income. Thus, a strengthened home learning environment should be a key outcome in LEAP's programme- and service-level theories of change.
- Improving a mother's education level can have an impact on children's home learning environment and language outcomes even after her child is born. There may therefore be merit in LEAP exploring the potential to raise mothers' educational level as part of their whole-system approach.
- There is good evidence on the effectiveness of targeted and intensive programmes that help parents to support their children's learning. The theory of change of the LEAP programme and relevant services should therefore indicate how these families will be identified and offered appropriate support.
- The evidence shows that 'light touch' programmes that aim to help parents to support their children's early learning are popular with parents. However, there is weak evidence that they can help to improve children's outcomes, such as language development. Further testing is therefore needed to assess whether these programmes can make a difference.
- The evidence does not explore differences between mothers and fathers in relation to their respective roles in creating a positive home learning environment. While it is often not clear if the evidence relates to mothers and/or fathers, it is likely to be mainly about the former. LEAP could consider building an evidence base on fathers: how they contribute to creating a positive home learning environment and what can be done to help fathers to support such an environment.

Early education and childcare (EEC)

- The evidence highlights the importance of good-quality EEC in supporting a range of children's early outcomes, but it also shows that EEC participation among disadvantaged children is lower than that of their peers. Therefore, as part of its whole-system approach, LEAP could consider addressing potential barriers to children accessing EEC and taking up their free entitlement. The theory of change of the programme and relevant services could indicate how these barriers may be identified and removed.
- While the quantity of EEC that children receive seems important, there is no consensus on the 'ideal' number of hours per week required to support children's outcomes. When considering the impact of the quantity of EEC, the literature does not typically consider parents' views. LEAP may want to be guided by parents on this issue, as they are well placed to judge their children's needs and consider how EEC can support the whole family (e.g. by increasing parents' earning potential, as discussed later).
- The quality of EEC is very important, but views on how this should be assessed and measured vary. LEAP may wish to work with EEC settings and parents to consider what good-quality EEC provision should look like locally and what can be done to support it.

Parental mental and physical health

- While maternal health is a more distal influence on young children's outcomes than the parent-child relationship or a family's economic situation, it is nevertheless an area that benefits from early intervention. Support for women from the ante-natal period in mitigating the impact of poor mental health (e.g. depression) and physical health (e.g. smoking and substance abuse) may have considerable benefits for women and children. LEAP's programme-level theory of change and relevant services should therefore consider maternal health as a key area of focus.

- Screening is recommended for two of the most common maternal health problems, i.e. depression and smoking in pregnancy, as identification is key to effectively tackling these problems. There is a good evidence base of what works to help mothers deal with these health issues. LEAP could therefore incorporate into the theory of change of the programme and relevant services the identification and referral processes for maternal depression and smoking in pregnancy.
- The evidence base on what works in relation to maternal substance abuse is not strong. LEAP may want to invest resources in identifying and testing robust approaches for dealing with a health issue which affects a small number of mothers, but potentially has negative consequences for children's early development.
- Once again, we must point out the lack of evidence on fathers and the need for a better understanding of how their health may affect their children's early development and what can be done to support fathers who need help.

Child nutrition

- The evidence shows that good nutrition affects different aspects of children's early development. It would therefore seem important for good nutrition to be included in the theory of change of the LEAP programme and of relevant services.
- There are a number of interventions that have proved effective in supporting breastfeeding and other aspects of child nutrition in the early years. Given that children from poor families are less likely than other children to receive good nutrition, an important consideration for LEAP would be whether (and if so, which) interventions should be made available to all families, and which should be targeted at low-income households.

Family relationships

- There is evidence to suggest that supporting the quality of the interparental relationship in the early years can be as important as supporting the parent-child relationship, since one can influence the other and have considerable benefits for children. LEAP could therefore consider whether this area of intervention should be part of its whole-system approach and include it in its programme's theory of change and that of relevant services.
- Recent evidence on the effectiveness of screening for domestic violence suggests that LEAP could consider introducing processes for identification and referral as part of routine visits (e.g. ante-natal visits). However, the evidence on the effectiveness of domestic violence programmes is weak and these require further testing.

Families' financial circumstances

- While families' economic situation does not determine children's outcomes, it does increase the risk of poor outcomes across a range of areas. Therefore, it might be helpful for LEAP to use families' economic circumstances as a lens through which all programme activities should be understood. Adverse circumstances associated with low income can make it harder to 'parent', and this should be clear in any assumptions that are made in the programme's and relevant services' theory of change.
- There is limited scope for a local programme to improve the financial circumstances of low-income families with young children. However, there are areas of intervention that LEAP could consider as part of its whole-system approach, for example, collaboration with financial advice services, employment agencies and educational institutions to help parents to increase their income. It could also consider, supporting low-income families to access (subsidised) childcare and ensuring that childcare services meet the needs of parents who work or study.

Environmental and community influences

- There is limited evidence on the influence of environmental factors on children's outcomes. However, what evidence there is suggests that although environmental factors can have a direct impact on children's

outcomes, their impact is just as likely to be felt through their influence on parents' relationships with each other and with their children. Therefore, it is suggested that LEAP focuses on the potential for environmental factors to impact on other key influences on children's outcomes (such as parents' mental and physical health, the parent-child relationship and the home learning environment) and consider how these impacts could be mitigated through the programme and its individual services.

Relative importance of different influences

Unpicking the relationship between the influences on early child development explored in this review is problematic and there is limited evidence about the relative importance of the various factors discussed above. As mentioned above, families' economic situation provides a lens through which all the other factors can be viewed, since low income both generates some direct impacts for children and can augment the negative impact of the other influences identified. However, while poor economic circumstances can increase the risk of poor child outcomes, they do not determine them, and the evidence shows that supporting parents' relationships and interaction with their children can make a difference, regardless of socio-economic background.

The evidence, therefore, suggests that LEAP's core focus should be on influences on the parent-child relationship, interparental relationship and the home learning environment. However, early education and childcare, child nutrition and maternal mental and physical health are also important. While evidence of the impact of wider environmental and community influences is less prevalent, there is nonetheless merit in considering these factors in relation to the other influences discussed above, as part of LEAP's whole-system approach. Indeed, the complex relationship between the various influences on children's early development make it all the more necessary to have a place-based initiative, such as LEAP, that can identify families' needs at different stages and draw on support from a range of sources.

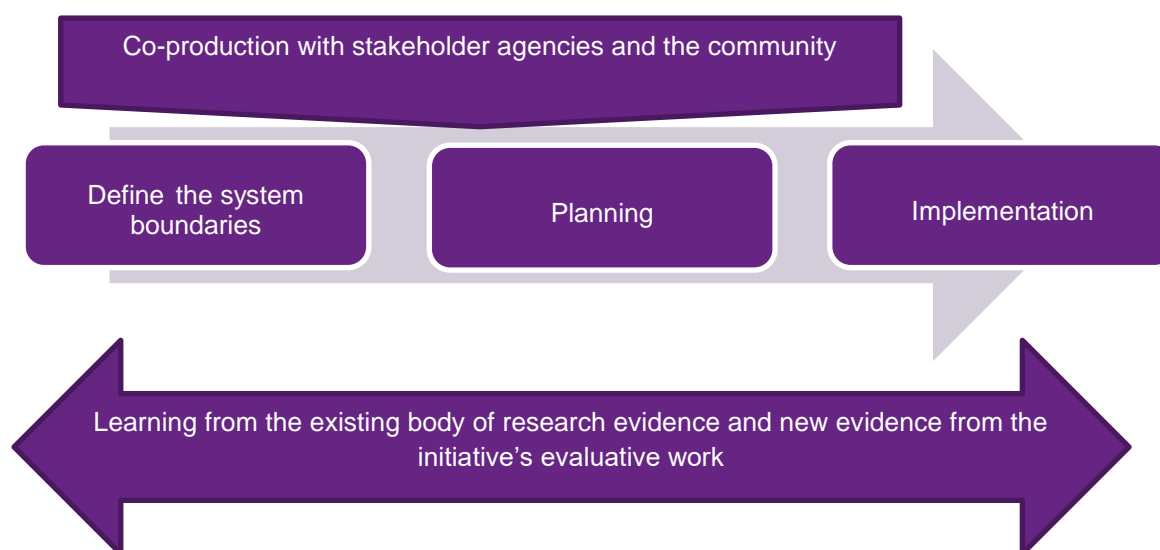
A place-based approach to reducing inequalities in the early years

LEAP uses a place-based, collective-impact framework and approach. A place-based approach is underpinned by the assumption that addressing complex social problems requires collective solutions involving all key stakeholders. Place-based initiatives are characterised by four defining features:

- They are designed to reduce the circumstances and processes that produce unfair differences by addressing the predictors of inequalities.
- They involve collaborative work across different organisational borders and levels within organisations to develop a shared vision and harness their combined reach and resources to realise this vision.
- They fully engage the local community in deciding what needs to change and in implementing change.
- They are evidence-based and often conceived as 'test and learn'.

The transformational changes that place-based initiatives expect to achieve require systems change. Below we summarise the evidence on how systems change and the learning for LEAP, in terms of the questions to be addressed by its theory of change. Figure 1 shows the phases involved in system change, which are explored in turn below.

Figure 1 How do systems change and do we know it?



The importance of defining the boundaries of a system is stressed in the systems change literature. Where boundaries get drawn is potentially very significant and requires open conversations to ensure that the boundaries are meaningful to all stakeholders.

Box 1 Questions LEAP should consider in order to understand whether the boundaries of its system and how they were defined support systems change

- What are the boundaries of LEAP?
- Who was involved in defining these boundaries, who was excluded from this decision and why?
- Has evidence informed decisions about these boundaries, and if so, what kind?
- How are the LEAP boundaries communicated, for example, through its partnerships (who is in and who is out), services and programmes, and what is and is not measured?
- Are there mechanisms for reviewing these boundaries, for example, in response to changing local needs, stakeholders' views or new evidence?

There are two key planning elements that are consistently associated with successful systems change and should therefore be monitored to assess whether systems are changing as expected. These are the processes for gaining an in-depth understanding of local needs, and for deciding which programmes and services to provide.

Box 2 Questions LEAP should consider in order to understand whether its planning activities support systems change

Assessing and prioritising local needs	Decisions on programmes and services
<ul style="list-style-type: none"> • What evidence has informed the LEAP needs assessment (e.g. national versus local data, data provided by different stakeholder organisations)? • What 'story' is the needs assessment telling about early intervention and the predictors or determinants of inequalities in early childhood locally? • To what extent is the LEAP needs assessment 'owned' by families and the community? • To what extent is the LEAP needs assessment 'owned' and used by all stakeholder organisations, e.g. do they see it as 'their' needs assessment too and use it for planning purposes? • To what extent are stakeholder organisations using shared processes and tools to reach and identify families who need targeted support? • Are there mechanisms for regularly reviewing the needs assessment, e.g. in line with new research evidence, local evaluation findings, changing local needs? 	<ul style="list-style-type: none"> • Is there evidence of a growing investment of resources in early years evidence-based interventions in the LEAP areas? • Is there evidence of a shift in pooled or aligned budgets to pay for early years evidence-based interventions in the LEAP areas? • Is commissioning of early years services being integrated, e.g. is there joint commissioning and/or a move to a single commissioner accountable for early years in the LEAP areas? • How are early years programmes selected by LEAP and stakeholder organisations? • Are there plans for evaluating programmes delivered by LEAP and stakeholder organisations, and if so, what are they? • Who is involved in shaping and informing the evaluative work carried out by LEAP and stakeholder organisations (e.g. parents and community representative), and how?

When it comes to implementation, the evidence suggests that successful systems change requires: a shared outcomes framework to ensure that all efforts remain aligned; evaluative evidence to inform decisions about service and programme delivery; and an assessment of community involvement. In addition, transformation in early years systems requires: effective sharing of information and operational data about families; a shared approach to working in a family-centred way; and an integrated workforce.

Box 3 Questions LEAP should consider in order to understand whether its implementation activities support systems change

- Is there a shared outcomes framework that all stakeholder organisations have signed up to and 'own'?
- Do families feel that the outcomes framework provides a good way to assess whether local services and agencies meet their needs and engage them in service co-production?
- Are there mechanisms for regularly reviewing the outcomes framework, e.g. in line with new research evidence, local evaluation findings, changing local needs?
- What systems are in place for sharing information about families and operational data?
- Is there a shared strength-based model of working with families or a plan to introduce it?
- What is being done to integrate the ways of working of different stakeholder organisations?
- How are the evaluation findings used?
- How is the community involved in service provision?

Conclusion

In addition to the implications identified above, in developing its programme- and service-level theories of change, LEAP may want to consider the following:

- While it is important to focus on interventions that address influences known to be central to child outcomes, just because an intervention is focused on such areas, this does not necessarily mean that it is effective. Programmes should be well evidenced, and the evidence base that LEAP already has for the individual services that it and partners deliver should be acknowledged in the development of LEAP's theory of change and shared measurement approach.
- Since the evidence suggests that disadvantaged families require targeted and sustained interventions as well as more universal support, the theory of change should take into account the links between groups of activities and expected outcomes. For example, it should not be assumed that limited 'light touch' services alone are sufficient to achieve positive outcomes for all families.
- The importance of who delivers interventions, and specifically their qualifications and skills, demonstrates that LEAP's current focus on workforce development is likely to be beneficial to effective delivery. It is therefore important that this remains a key component of LEAP's strategy and that this is reflected in the theory of change.
- For a place-based approach such as LEAP to work, effective mechanisms are required to identify children and families who need additional support and for engaging them. These are important goals that, along with the processes that are needed to underpin them such as effective partnerships and information sharing, should be reflected in the initiative's theory of change.
- For individual programmes and services to be successful, evidence suggests that working in partnership with families by building on their strengths helps to empower them to engage with a service more effectively. This too should be reflected in the development of the theory of change.
- Part of the process of developing a theory of change is the exploration of unintended negative consequences. One potential issue for LEAP is that, in developing the services that it funds directly, it may unwittingly cross into the terrain of some local statutory services, which then reduce their resources in response. This would have clear implications for the local area, particularly when A Better Start concludes. Considering how to mitigate this and any other identified unintended consequences should be a central part of the development of the shared measurement approach.

More generally, the evidence explored in this review has the following implications for LEAP as a programme:

- LEAP cannot directly intervene in every area. To reach a wide range of families and to tackle a wide range of factors, LEAP needs to be clear about where it is funding services directly and where it is partnering with other organisations to deliver services. Greater clarity on what the respective contributions of LEAP and its partners will help LEAP to have a more effective place-based approach.
- As part of its commitment to evidence and in attempting to create an effective collective-impact model, LEAP should consider whether all relevant stakeholders are included in the design and delivery of the initiative and ensure that no one is excluded or feels left out.
- Likewise, LEAP should continue efforts to bring the local community into its working model and ensure that this remains a consistent part of its activity to ensure effective collective impact. The role that LEAP's parent champions play supports community engagement, since they not only deliver peer support but are used for testing ideas. However, there may be opportunities to take this further and for LEAP to actively bring a wider range of families (including those most in need of its services) into the design and delivery of the initiative.

1. Introduction

This rapid evidence review was commissioned by the Lambeth Early Action Partnership (LEAP), an initiative based in the London borough of Lambeth, which aims to reduce inequalities in the early years. LEAP is supported by the National Lottery Community Fund, as part of the A Better Start programme. The review was commissioned by LEAP to inform revisions of its programme- and service-level theory of change, shared measurement framework and evaluation.

This chapter starts with a brief overview of A Better Start and LEAP. It then discusses the aims of the review and how it was carried out. The last section outlines the report's content.

1.1 A Better Start and LEAP

A Better Start (ABS) is a ten-year (2015-2025), £215 million programme set up by the National Lottery Community Fund. There are five ABS partnerships, based in Blackpool, Bradford, Lambeth, Nottingham and Southend. The partnerships work with local parents to develop and test ways to improve their children's diet and nutrition, social and emotional development, speech, language and communication in the early years. ABS is a place-based initiative, which aims to improve the way organisations work together and with families to shift attitudes and funding towards preventing problems that can start in early life. The work of the programme is grounded in scientific evidence and research (Axford and Barlow, 2013; National Children's Bureau, 2019).

LEAP, the Lambeth ABS partnership, uses a place-based, collective impact framework and approach to achieve its ultimate goals. This means that LEAP brings together people and organisations to share information and work in mutually reinforcing ways to meet the unique needs of local children and families, and achieve place-based collective impact on:

- Improving young children's diet and nutrition.
- Developing their social, emotional, language and communication skills.
- Reducing inequalities.

This approach is used by LEAP because children's lives are shaped by multi-level and interactive influences, including family, education and care, and social and cultural contexts. There are limits to what single initiatives working in isolation can achieve. Therefore, LEAP's programme- and service-level activity is coordinated to contribute to the areas of focus outlined in table 1.1.

Table 1.1 LEAP's programme- and service-level activity

Areas of focus		Example outcomes	Example of LEAP and service activity
Our direct work with children (across all three developmental domains)	Children are developing well	Fewer children (under 5) with high or low body mass index (BMI).	Incredible Edible; Caseload Midwifery
		More children are developing age-appropriate comprehension of written and spoken language.	Making it REAL for under 3s; Speech and Language Therapy Chattertime and Evalina Award
Our work to enable an environment and context that is conducive to good childhood development	Improved parenting skills and behaviours	More parents/carers providing a stimulating home learning environment.	Doorstep library; Sharing REAL with parents
		Improved parental responsiveness and secure parent-child attachment.	Baby Steps; Parent and Infant Relationship Service (PAIRS)
	Promoting conditions for positive parenting	More parents/carers are improving their basic skills, particularly in literacy and numeracy.	Community Awards; Sharing REAL with Parents
		More parents/carers with good mental well-being.	Group Pregnancy Care; Family Nurse Partnership
	Family- and child-friendly communities	Improved public understanding of the importance of early years and the role of early childhood education and care.	Big Little Moments; Community engagement strategy
		Improved social capital.	Parent Champions; Community engagement strategy
	Effective and efficient early intervention systems and partnerships	More integrated planning and delivery of services and resources for children and families.	LEAP's backbone function (i.e. systems mapping, theory of change work, shared measurement system); Health Team
		Improved early years and wider workforce expertise to effectively and efficiently support children and families	Workforce strategy; LEAP Family Partnership Model

1.2 Aims of the rapid evidence review

As it enters its fifth year, LEAP is revising its programme- and service-level theory of change and shared measurement framework. This review was commissioned to ensure that any revisions are rooted in research evidence, as well as the experience and learning from the past five years.

The aim of the review was to synthesise the evidence on:

- What factors influence children's development in the early years.
- What works to support children's development in the early years.
- The challenges and strengths of the whole-system place-based approach to bring about transformational, sustainable and long-term improvements.

1.3 How the review was carried out

1.3.1 Review parameters

The review has focused on the English language literature from high-income countries, published between 2010 and 2019, although key studies outside this period identified through reference harvesting were also considered. As there have been many high-quality early years reviews in recent years, the search relating to key influences on child outcomes and 'what works' focused on systematic and rapid evidence reviews. However, when relevant, individual studies identified from these reviews were also examined. The searches relating to place-based approaches covered all types of studies and did not focus only on reviews. The search strategies, with the key words used, are included in the appendix.

Databases for the searches were selected to elicit multi-disciplinary evidence from sources aimed at both academics and practitioners, as indicated in table 1.2.

Table 1.2 Databases used for the searches*

ASSIA Australian Education Index British Education Index ERIC International Bibliography of the Social Sciences	Medline OpenGrey Social Policy and Practice (SP&P) Social Services Abstracts Other major NGO websites not covered in SP&P
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*In some cases, the search host allowed single searches of multiple databases; in such cases, some databases not listed here were included.

1.3.2 Review results

999 items were identified through the searches; these items were screened in two stages:

- The preliminary stage involved screening from titles and abstracts to identify relevant items for an assessment based on the full text: 80 items were selected for a full assessment.
- Items selected at the first stage were assessed using a set of inclusion criteria relating to the aims of the review, including: predictors of outcomes in the early years; interventions to influence these predictors; defining features of a place-based approach; what works well and less well in implementing a place-based approach. Items with a stronger evidence base were prioritised. At this stage, 31 items (e.g. academic articles, research reports) were selected for inclusion in the review.

Evidence from the 31 selected items was summarised in a structured template, which included information about: the study’s aims; the research design and an indication of its methodological robustness and limitations; a summary of relevant findings; and relevance to LEAP. In addition to the reviewed items, the authors used their expertise and suggestions from an expert adviser to identify some additional references to extract specific information to complement the findings from the items reviewed.

1.3.3 Limitations of the review

There were limited resources available for the review, while the scope of the study was very broad. The review covered two very different topics, namely: ‘what matters and what works’ to support children’s development in the early years; and the challenges and strengths of the whole-system place-based approach. These two topics required separate search strategies, screening and evidence sources. This means, for example, that the findings on ‘what matters and what works’ are based on 17 data sources, a very small number for what is a broad and complex topic. We partly dealt with this limitation by focusing on reviews, so we could cover the main determinants of early child development and areas of intervention. However, in order to achieve this breadth, the depth of the study had to be sacrificed, with findings mainly presenting a broad picture rather than a detailed and granular analysis.

It should also be noted that the literature on early years does not typically consider the specific circumstances of children with a child protection plan because they are at risk of abuse or neglect, and children who are in the care of the state, i.e. looked-after children. These children are therefore not covered in the report, although they are obviously important for LEAP, as the programme can help to prevent children from becoming at risk or entering the care system, and can work alongside statutory services to support these children and their families.

1.4 Report structure

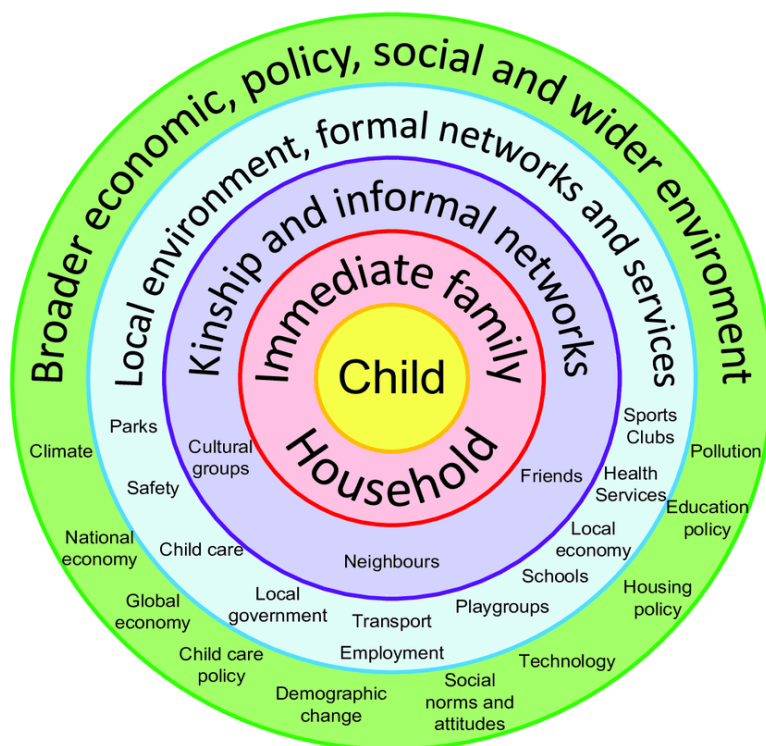
The first part of the report (chapters 2-9) focuses on the key factors that influence children’s development in the early years and what works to support their development. The second part (chapter 10) focuses on the whole-

system place-based approach. Finally, the conclusions and their implications for LEAP are presented in chapter 11.

1.4.1 What matters and what works in the early years

As LEAP's ultimate aim is to reduce inequalities in the early years, the scope of the programme is very wide in terms of the areas it tries to influence. The national programme suggests that the Bronfenbrenner Ecological System model (figure 1.1) is helpful in considering how wide the programme may need to cast its net to reflect the components of the wide system within which a child exists, and the complex interactions between these components (Axford and Barlow, 2013; National Children's Bureau, 2019).

Figure 1.1 The Bronfenbrenner Ecological System model*



*Diagram based on Bronfenbrenner's 1979 ecological model, reproduced in National Children's Bureau, 2019.

The first part of the report (chapters 2-9) discusses the determinants of early childhood development. These do not cover all the components outlined in Bronfenbrenner's ecological model, partly because there is little or no evidence on the relationship between some of these components and child development, but also because of the limitations of this review, as discussed above. Nevertheless, the first part of the report provides a synthesis of the most recent and high-quality evidence of what have been identified in the literature as the determinants of early childhood development that have been more extensively researched (see figure 1.2).

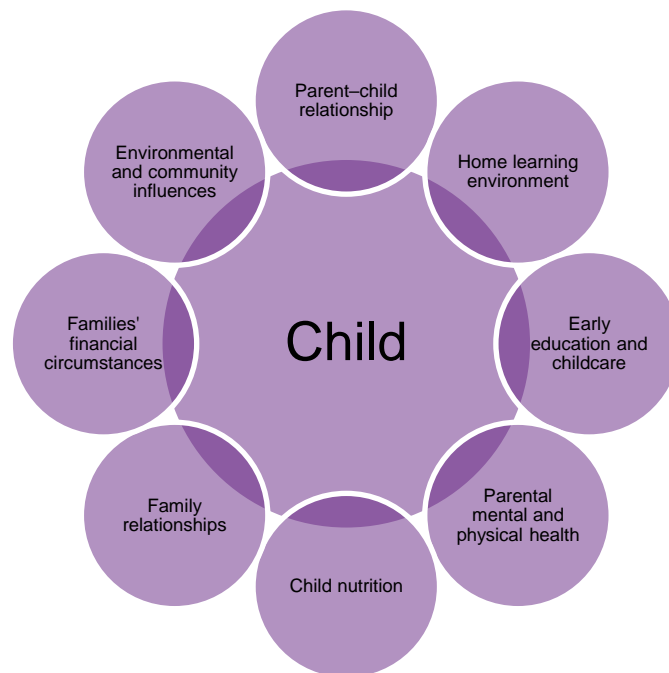
Each chapter considers the evidence of why a determinant is important, and how socio-economic factors can affect these determinants and result in inequalities in children's development. For each determinant, we also discuss the evidence of what works to support children's development and reduce inequalities in the early years. We conclude each chapter by considering the implications for LEAP.

A range of variables have been used to explore factors linked to inequalities in the literature we have reviewed. Some studies have explored differences between children from families with different income levels (e.g. low-income families) or defined as being in poverty because the household income is below a certain threshold. Other studies have used parental socio-economic status, which can be based on a combination of parental education, income and occupation. Some studies have used the concept of 'disadvantage', which typically reflects financial

difficulties (e.g. living on a low income) and can also include difficulties due to other family circumstances (e.g. domestic violence, parental substance abuse). As the findings reported are based on reviews covering numerous studies, it was not feasible to provide definitions for all the measures discussed in the report.

Some of the terminology used in the report (e.g. 'disorganised attachment') may be seen as contrary to LEAP's approach, which challenges a model of parenting that sees parents as part of the problem, and instead sees parents as active agents and advocates for their children. However, in the report, we had to use the language used in the studies reviewed, as this reflects specific concepts and how they have been operationalised in research studies.

Figure 1.2 Determinants of early child development reviewed in the report



1.4.2 A whole-system place-based approach

The second part of the report (chapter 10) covers a very different topic and aims to provide an understanding of the approach LEAP has adopted to achieve its goal of reducing inequalities in the early years. We first provide a general overview of the key defining features of a place-based approach. We then consider the kind of systems change that this approach involves, and what questions one should address in assessing whether LEAP is supporting the kind of systems change required to achieve its goals.

2. The parent–child relationship

The parent–child relationship is fundamental to children’s outcomes. The ways in which parents interact with their child has a direct influence on children’s learning, cognitive and non-cognitive skills, and social and emotional development, all of which give young children foundations on which to thrive. This chapter looks at the importance of the parent–child relationship in the early years. It explores the ways in which inequalities can influence the strength of the relationship, considers the relative importance of parenting skills as an influence on child outcomes, and looks at the evidence of what works to support parenting approaches. It concludes by looking at the implications of this evidence for LEAP.

2.1 The importance of sensitive parenting and attachment

There is a consensus in the literature that the quality of the attachment relationship between infants and their parents is fundamental to a child’s development and future outcomes. This is described as having a ‘secure’ or an ‘insecure’ attachment. An infant is thought to be ‘securely’ attached when they have learned that they can turn to their caregiver for comfort when distressed (Axford et al., 2015). Having a ‘secure’ attachment provides infants with a solid base from which to explore the world (Mathers et al., 2014). ‘Secure’ attachment also allows early social and emotional learning to take place (Asmussen and Brims, 2018), and paves the way for infants to develop a sense of self-awareness. There are two types of ‘insecure’ attachment. The first is described as ‘avoidant’ attachment, and refers to children who have learned to avoid their parent when they are distressed because the parent does not respond to their emotional needs. The second type is referred to as ‘disorganised’ attachment. This happens when young children are exposed to parenting behaviour which frightens them and increases their distress rather than comforting them (Dartington Service Design Lab, 2018). ‘Disorganised’ attachment can create psychological and behavioural difficulties as children grow older, and has the potential to severely compromise the child’s long-term wellbeing (Asmussen and Brims, 2018; Axford and Barlow, n.d.).

The literature suggests that the quality of the attachment relationship is influenced by three factors (Asmussen et al., 2018; Dartington Service Design Lab, 2018):

- **Sensitive parenting** is parenting that is consistently responsive to the child’s needs and any signs of distress and which acts as a buffer to any stressful situations that the child might experience.
- **Mind-mindedness** is the interaction that takes place when the parent recognises that the infant has a mind of her/his own, can recognise what the infant is feeling, and responds accordingly.
- **Midrange interaction** is described as a parent’s interaction with the infant which is neither too intrusive nor too passive.

2.2 Inequalities relating to sensitive parenting and attachment

The majority of parents naturally encompass the three elements identified above in their parenting style and form a secure attachment with their children. The evidence suggests that a secure attachment relationship is present in at least two-thirds of the population (Asmussen and Brims, 2018). However, the prevalence of ‘disorganised’ attachment is considerably higher in disadvantaged populations, with some studies suggesting that it can be as high as 40% among disadvantaged groups (Barlow et al., 2016). The evidence suggests that parental stress and poor mental and physical health are risk factors for an ‘insecure’ attachment relationship. Parents living in poverty are more likely than other parents to experience these factors and therefore potentially less able to respond sensitively to their child’s needs (Dartington Service Design Lab, 2018).

‘Disorganised’ attachment is also more likely where children experience parental behaviour that is unpredictable, frightening or abusive. Although positive parenting approaches are found within all socio-demographic groups, there is a body of evidence (referenced in Bowers et al., 2012) that suggests that lower socio-economic status is correlated with more negative or harsh parenting approaches. Crucially, there are indications that it is not only

more negative parenting practices that can have a harmful effect on the attachment relationship, but the absence of more positive approaches which is also associated with lower socio-economic status (Bowers et al., 2012).

A parent's own childhood experiences and attachment relationships, the quality of the couple's relationship (see chapter 7) and the family's wider support networks (see chapter 5) are also identified as factors that can influence the nature of parent-child attachment (Asmussen and Brims, 2018; Asmussen et al., 2016; Dartington Service Design Lab, 2018).

Asmussen et al. (2016) also identify some characteristics of children that increase the chance of an 'insecure' attachment forming. They note that children who have a neurological disability and infants who are generally difficult to soothe are at greater risk of an 'insecure' attachment than their peers (Asmussen et al., 2016).

2.3 The relative importance of parenting approach and sensitive parenting

There is no consensus in the literature about the relative importance of the various factors that influence child outcomes. Indeed, there is limited evidence that considers the relative importance of these influences at all. This is likely to be due, at least in part, to the methodological challenges of researching the influence of one factor while controlling for others. That said, there is a reasonable degree of agreement in the evidence we have reviewed that the parent-child relationship is central to child outcomes, since it helps to form the base from which a child explores the world. While low income is associated with negative child outcomes, there is also some evidence that parental activity can mitigate their socio-economic circumstances to a degree. The evidence shows, for example, that the quality of parenting behaviours and parent-child interactions has a greater effect on children's outcomes than parental education level and family income (Asmussen et al., 2016; Dartington Service Design Lab, 2018). The parent-child relationship should therefore be considered as a primary site for intervention.

2.4 Supporting the parent-child relationship

Interventions to improve the parent-child relationship in the early years vary considerably, ranging from 'light touch' programmes to intensive interventions targeted at families with specific needs. An overview of the evidence on the effectiveness of different types of programme is provided in this section. It should be noted that the literature often refers to parents without making it clear whether programmes were tested with fathers as well as mothers.

2.4.1 'Light touch' information programmes

There are programmes to support the parent-child relationship which are based on the assumption that good information on how parents can affect their children's outcomes in the early years can improve attachment and parental sensitivity, and equip parents with strategies for effectively managing children's behaviour. These information programmes rely on a range of media, including written and electronic information. There is very limited evidence on their effectiveness, as they have not been tested, or the evaluation results have not been conclusive (Axford et al., 2015). However, a couple of promising examples are cited by an extensive review carried out by Axford et al. (2015):

- Baby Express: a newsletter that provides information on emotional development, parent-child interaction and play. It is sent monthly to parents in the child's first year, and then every two months for four years. One trial found improvements in some aspects of parenting linked to attachment security (e.g. appropriate expectations), but no impact on parental empathy towards the child's needs.
- Triple P Universal: this programme provides information on effective parenting strategies through a range of media (e.g. newspaper, television, radio and flyers). Three trials have found mixed but overall positive impacts on some aspects of parenting and children's behaviour.

2.4.2 Group-based programmes

Two extensive reviews of early years interventions (Asmussen et al., 2016; Axford et al., 2015) have assessed the evidence on universal group-based parenthood preparation programmes, such as Family Foundations and Right from the Start. These programmes typically involve a small input (e.g. 2 hours for 8-9 weeks before the birth) delivered by a professional. However, due to limited evaluation, the impact of these on attachment and sensitive parenting is not known. There is slightly better evidence for universal behaviour management programmes (e.g. 123 Magic and COPEing with Toddler behaviour) (Asmussen et al., 2016; Axford et al., 2015).

There is better (but not conclusive) evidence on group-based early years programmes that are targeted at parents because of identified attachment risks (Asmussen et al., 2016; Axford et al., 2015). For example, Mellow Babies and Baby Steps have been found to have a positive impact on the parent–child relationship. Some group programmes targeted at parents of children who show early signs of challenging behaviour have strong evidence of impact, with Triple P and Incredible Years being notable examples. A promising programme targeted at fathers (Supporting Father Involvement) was also cited in the literature (Asmussen et al., 2016; Axford et al., 2015).

2.4.3 Live demonstrations

Axford et al. (2015) and Barlow et al. (2016) have reviewed early years programmes that aim to improve parents' responsiveness by providing live demonstrations by professionals (e.g. health visitors, midwives) of interactions with children, to increase parents' awareness of infants' development and their capacity. These programmes have shown some promising results at the universal level (e.g. increase in parental sensitivity), while the results are more mixed with families facing a high level of risk (e.g. on the grounds of abuse, mental health issues, substance misuse). On the other hand, video feedback on parenting behaviour seems effective with high-risk families, particularly in relation to discipline strategies and parental sensitivity, less so in relation to attachment. Similarly, evidence on live demonstration programmes involving infant massage indicate more potential to be effective with families facing a high level of risk, while it was found to have no impact on families who did not face high risks (Axford et al., 2015; Barlow et al., 2016).

2.4.4 Individually delivered targeted programmes

Axford et al. (2015) and Barlow et al. (2016) have reviewed targeted early years programmes offered to families facing a high level of risk (e.g. due to abuse, neglect, domestic violence). These programmes are delivered individually by a trained professional and involve a substantial input. While these interventions can vary considerably overall, the evidence base is good. For example, parent–infant psychotherapy when children have experienced trauma (e.g. abuse, neglect) has been found to have a positive impact on a child's behaviour, attachment security and post-traumatic stress disorder symptoms. Individual programmes for children with serious behavioural problems (e.g. Triple P and Parent Child Interaction Therapy) and programmes targeted at parents with specific needs (e.g. Parents Under Pressure for parents with substance abuse) have been found to have positive effects on the parent–child relationship and the child's behaviour, and reduce the risk of child abuse (Axford et al., 2015; Barlow et al., 2016).

2.4.5 Home visiting programmes

Finally, some well-tested home visiting early years programmes have been found to have a positive impact on the parent–child relationship (Axford et al., 2015; Barlow et al., 2016). Elements of these programmes that seem to underpin effectiveness in improving parenting skills include: coaching parents on how to respond sensitively to a child's cues; using role play to give parents an opportunity to practise parenting skills; and, providing strategies for age-appropriate discipline (Asmussen and Brims, 2018). Some more recently developed programmes are based on the psychological concepts of mentalisation (i.e. the ability to understand your and others' mental state) and mental functioning; while these have not been fully tested yet, they appear promising (Axford et al., 2015).

2.5 Implications for LEAP

Box 2.1 Implications of the findings on the parent–child relationship

- The parent–child relationship is fundamental to children’s outcomes. Therefore, having a strong parent–child relationship should be a key outcome for LEAP’s programme-level and relevant service-level theories of change.
- The evidence suggests that there is merit in intervening early to support the parent–child relationship, and that some disadvantaged parents may be particularly likely to benefit from support. Interventions should focus on supporting parents to understand the importance of the quality of their interactions with their children and to ensure that services support the development of this relationship.
- The evidence on what works suggests that as well as universal information and group-based programmes, a range of targeted interventions are required to support families with specific and high-level needs. The theory of change of the LEAP programme and of relevant services should therefore indicate how parents with these needs are identified and offered the appropriate support.
- The evidence does not explore differences between mothers and fathers in terms of the impact of the parent–child relationship on children’s early development. While the literature often does not clarify whether the evidence relates to mothers and/or fathers, it is likely to be mainly about the former. LEAP could consider building an evidence base on fathers: how the relationship with their child is important and what can be done to support it.

3. The home learning environment

A child's home learning environment is central to children's cognitive outcomes and notably their school readiness (Bowers et al., 2012). This chapter starts by exploring the features of a positive home learning environment and its importance in the early years. It then explores inequalities in relation to the establishment of a positive home learning environment and its relative importance compared with other influences on early child development. The last part of the chapter considers the evidence on what works to support parents in providing a positive home learning environment. It concludes by exploring the implications of this evidence for LEAP.

3.1 The features of a positive home learning environment

The home learning environment encompasses opportunities for children to learn from parents and carers in the early years. It includes a range of learning activities that children are exposed to at home, such as playing with letters and numbers, painting and drawing, and learning nursery rhymes and songs (Siraj-Blatchford and Siraj-Blatchford, 2010), as well as activities outside the home, such as going to parks, museums and libraries. Also important is the range of materials that children have access to, such as books and toys; specifically, those that provide opportunities for shared attention and book sharing between parent and child can support children in their language development (Asmussen et al., 2018).

A positive home learning environment is made up of both informal opportunities for children to learn and more formal direct teaching from parents (Dartington Service Design Lab, 2018). The literature identifies a range of factors and approaches that help create a positive home learning environment and positively influence child outcomes. High on this list is the quality of verbal exchanges between parent and child. From the earliest days, the nature of this interaction can have an impact on later development. Bowers et al. (2012) point out that conversation not only helps to enhance children's language skills, but enables them to explore their feelings about and extend their understanding of their environment. Evidence also suggests that language exchanges that are rich and varied support the development of a child's vocabulary, and the cognitive and memory skills required to improve reading comprehension at a later stage (Dartington Service Design Lab, 2018).

While the number of words children hear from their primary caregivers is important for language development (Axford et al., 2015), the way in which adults engage in conversation with children is equally significant. The review by Dartington Service Design Lab (2018) suggests that adults taking the lead from the child and communicating with them when the child is ready to receive and process that communication is hugely important. Indeed, all activities that encourage the use of narrative are considered to help children's early learning. Mathers et al. (2014) suggest that parents' and carers' narrative discussion should include two key elements. First, experiences and stories should be related in a range of forms. Second, children should be encouraged to tell their story in their own way and to reflect on events that either have happened or might happen. This sort of narrative discussion enhances the child's vocabulary and supports their social and emotional development by developing their sense of self and independence (Mathers et al., 2014).

Access to books, book sharing and reading aloud with children are other key features of a positive home learning environment. The evidence consistently shows that shared book reading has a direct impact on children's vocabulary. The Longitudinal Study of Australian Children (LSAC) found that when combined, the level of children's participation in shared attention activities at nine months and the frequency of book sharing experiences in their first three years were better predictors of a child's vocabulary aged three than either their gender or mother's education. The same study found that the number of books in a child's home was a good measure of the levels of shared reading and was therefore a useful predictor of a child's vocabulary at age five (Asmussen et al., 2018). However, Asmussen et al. (2018) note that while the number of books or number of words that children hear may be predictors of language outcomes, it is the quality of the linguistic interactions or conversations between children and parents or carers that is really important. Specifically, they suggest that early

language development is best supported by conversations with the parent (or carer) that respond to the child's interests and are appropriate for their age. They suggest that:

- **Infants benefit from infant-directed speech that occurs during joint attention activities involving household items and toys**
- **Toddlers benefit from activities that increase their vocabulary by introducing them to new words**
- **Two-year-olds benefit from more grammatically complex conversations that are responsive to their particular interests and are decontextualised from the present moment**
- **Three and four-year-olds benefit from conversations that encourage them to listen to and produce structured narratives.** (Asmussen et al., 2018, p.208)

Some evidence also suggests that the value of books goes beyond reading. Simply sharing and enjoying books together, by discussing the pictures and identifying objects, for example, can encourage early literacy skills. However, reading aloud and telling stories are also beneficial. The evidence suggests that repeating stories, as well as songs and rhymes, fosters a sense of security and familiarity in young children, which supports the development of their vocabulary and wider language skills (Mathers et al., 2014). There is also evidence that regular and enjoyable early book sharing experiences create positive associations which can lead children to have an increased interest in books in the early years and engagement with reading when they are older (Asmussen et al., 2018). While the evidence agrees that book sharing has a positive impact on children's outcomes, Asmussen et al. (2018) point out that there is still a lack of evidence about exactly how much book reading is enough, as well as the relative importance of adults and children engaging with books together when compared to other forms of parent-child interaction.

The quality of the home learning environment is also influenced by the extent to which children are exposed to other enriching activities outside the home, such as visiting parks, libraries and museums (Law et al., 2017). The Growing Up in Scotland study found that the frequency with which children were read to at 10 months, alongside the range of activities outside the home when children were 22 months predicted children's knowledge of object names at age three, independent of family income (Asmussen et al., 2018). Access to toys which can promote shared attention activities are also beneficial to language development (Asmussen et al., 2018), as is having parents who monitor television viewing (Law et al., 2017).

It is also clear from the literature that for the home learning environment to be effective, there should be a strong attachment relationship. A parent who is well attuned to their child can respond sensitively to their needs, pick up on non-verbal cues, interpret their communications and respond appropriately (Mathers et al., 2014). For example, when a baby's cooing receives a positive response, they are more likely to feel confident and therefore to engage in verbal exploration and development (Bowers et al., 2012). As Mathers et al. (2014) suggest, more responsive parents:

...share and enrich children's narratives, support storytelling and creative games, teach early literacy skills and encourage children to play imaginatively together; allowing children to take the lead and provide structure or guidance when needed. (Mathers et al., 2014, p.179)

The extent to which parents engage in the ways outlined above is partly determined by how much they know about child development and their parenting approaches, as well as their parenting mindset beliefs (Axford et al., 2015; Dartington Service Design Lab, 2018). The review from the Dartington Service Design Lab (2018) therefore concludes that it may be worthwhile providing parents and carers with information about how the nature of parenting practices can influence child outcomes and how much difference they can make to their children's future.

3.2 The importance of a positive home learning environment

Children with a positive home learning environment at age three or four have been found to achieve better academically both in the early years and throughout primary school, although a positive home learning environment is important much earlier than age three. Conversely, children with a poorer home learning environment who do not benefit from the opportunities and activities outlined above perform less well on cognitive scores at age three (Asmussen et al., 2018; Siraj-Blatchford and Siraj-Blatchford, 2010). There is also evidence that a positive home learning environment allows children to benefit more from being at pre-school. Specifically, Siraj-Blatchford and Siraj-Blatchford, (2010) suggest that children who have more positive home learning environments can have better outcomes in reading and mathematics at primary age if they attend a pre-school, regardless of its quality, provided the primary school is effective.

3.3 Inequalities relating to the home learning environment

While there is strong evidence that a positive home learning environment can mitigate some socio-economic factors, it is also the case that more disadvantaged families are less able to provide such an environment. Lower-income families are less likely to be able to purchase reading materials and less likely to read to their children regularly, tending instead to spend more time on television consumption (Bowers et al., 2012). A positive home learning environment is also less likely and harder to achieve when children live in more chaotic households or are exposed to higher levels of risk (Dartington Service Design Lab, 2018). The literature suggests that children growing up in more affluent homes are more likely to experience a rich home learning environment, including more shared reading with parents, hearing more words, and having more books and higher-quality toys and experiences. Family income is also linked to parents' education level, which in turn impacts on children's learning outcomes. Evidence suggests that there is a strong link between mother's education and the quality of the home learning environment. Specifically, mothers who are educated to a higher level are more likely to have a more interactive parenting style both inside and outside the home (Bowers et al., 2012), compared with their counterparts with lower education levels. The evidence does not indicate whether this applies to fathers too. There is evidence to suggest that an increase in a mother's education level when their child is young can help improve that child's outcomes. Law et al. (2017) point to a study in which children's language skills improved if their mothers entered higher education after their children were born, and noted that:

...young mothers' experiences in higher education were associated with increases in their responsivity towards their children, as well as improvements in HLE [home learning environment] quality. These changes, in turn, predicted concurrent improvements in their children's language skills. (Law et al., 2017, p.31)

3.4 The relative importance of the home learning environment

As with parenting approach, the home learning environment is seen as a proximal factor that has the potential to hugely affect children's cognitive, social and emotional outcomes. While it is not possible to rank the various factors affecting child outcomes in order of importance, the evidence does suggest that the home learning environment should be considered fundamental. Several studies have found that there is convincing evidence that positive parental involvement in early learning has a greater impact on children's wellbeing and achievement than any other factor (Axford et al., 2015; Dartington Service Design Lab, 2018; Siraj-Blatchford and Siraj-Blatchford, 2010). For example, the longitudinal study Growing Up in Scotland (GUS) found that in children aged 34 months, the influence of the home learning environment on cognitive development was stronger than socio-economic status, parent education and income (Dartington Service Design Lab, 2018). Similarly, the Effective Provision of Pre-school Education (EPPE) longitudinal study indicates that families can improve their children's outcomes through providing an enhanced learning environment, regardless of their social class. Therefore, along with the parent-child relationship (discussed in chapter 2) and the family relationship (chapter 7), the home learning environment should be considered as a core area of focus for LEAP.

3.5 Supporting the home learning environment

In this section, we discuss interventions that aim to support the home learning environment in the early years, that is, family literacy, book sharing programmes, family-based support and home visiting programmes. It should be noted that the literature often refers to parents without making it clear whether programmes were tested with fathers as well as mothers.

3.5.1 Family literacy programmes

Family literacy programmes aim to increase parents' awareness of the benefits of book reading in the early years, usually via a book gifting programme and community-based initiatives in disadvantaged communities. Research has shown that these programmes are popular with parents, but there is very little evidence that they support children's language development. This is partly because they can vary considerably in terms of what they offer and because most of these programmes have not been robustly evaluated (Asmussen et al., 2016; Law et al., 2018).

3.5.2 Dialogical book sharing programmes

Early years book sharing programmes are called dialogical when they have two features. First, books used in these programmes have been specifically chosen to facilitate the parent–child interaction. Second, parents are taught strategies for engaging the child in the story through open-ended questions and by linking the story to real-life events. There is some evidence that these programmes can enhance children's vocabulary, and their metalinguistic and print skills. However, the effects are modest and these programmes seem less effective among children from low-income families (Asmussen et al., 2016). It has been suggested in the literature that to improve the effectiveness of these programmes, we need a better understanding of cultural differences in the role of books and how parents structure shared reading with their children (Law et al., 2018; Reese et al., 2010; Siraj-Blatchford and Siraj-Blatchford, 2010).

It has also been argued that the level of input these programmes provide should be considered, as they are typically very short. While the evidence on the amount of intervention is not conclusive, a review found that two (targeted) programmes with the best evidence of effectiveness (i.e. PEEP¹ and REAL²) lasted a year or longer (Asmussen et al., 2016). Furthermore, when 'lighter' versions of these two programmes were tested with reduced intensity, they were found to have no measurable benefits for children and parents (Asmussen et al., 2018).

3.5.3 Home visiting programmes and family-based support

The evidence shows that by supporting parental sensitivity in the first year, home visiting programmes, such as the Family Nurse Partnership and Child First, have a positive impact on children's language outcomes (Asmussen and Brims, 2018).

A review of family-based support with early learning delivered alongside centre-based early education found that it was not possible to distinguish the effects of the home support from the impact of the pre-school pedagogy (Siraj-Blatchford and Siraj-Blatchford, 2010). However, the review cites a longitudinal study that assessed the impact of early education and found that the quality of the home learning environment had a greater impact on children's cognitive development than the quality of the early education setting (Siraj-Blatchford and Siraj-Blatchford, 2010). As mentioned earlier, studies do not normally explain whether programmes were tested with mothers and/or fathers. This review is an exception, and notes the low involvement of fathers in the programmes they reviewed. The authors suggest that:

- Early years staff should be made aware of the need to engage fathers and should receive relevant training.
- Communication strategies and provision that appeal to fathers should be developed.

¹ Parents Early Education Partnership

² Re-thinking Engagement and Approaches to Learning

- More men should be employed in early years settings.

3.6 Implications for LEAP

Box 3.1 Implications of the findings on the home learning environment

- The evidence suggests that the quality of the home learning environment *can* have more impact on children's wellbeing and achievement than any other factor, including parental education and family income. Thus, a strengthened home learning environment should be a key outcome in LEAP's programme- and service-level theories of change.
- Improving a mother's education level can have an impact on children's home learning environment and language outcomes even after her child is born. There may therefore be merit in LEAP exploring the potential to raise mothers' educational level as part of their whole-system approach. This could also result in increased family's income, if it allows mothers to enter paid work or secure better paid employment, which could in turn have benefits for children, as discussed in chapter 8.
- There is good evidence on the effectiveness of targeted and intensive programmes that help parents to support their children's learning. The theory of change of the LEAP programme and relevant services should therefore indicate how these families will be identified and offered appropriate support.
- The evidence shows that 'light touch' programmes that aim to help parents to support their children's early learning are popular with parents. However, there is weak evidence that they can help to improve children's outcomes, such as language development. It is not clear whether this is because these programmes are not needed (i.e. most parents can provide a positive home learning environment without external support) or because the available programmes are not effective. If the latter, this could be because the input is not enough and/or programmes are not sensitive to cultural differences. Further testing is therefore needed to assess whether these programmes can make a difference.
- The evidence does not explore differences between mothers and fathers in relation to their respective roles in creating a positive home learning environment. While it is often not clear whether the evidence relates to mothers and/or fathers, it is likely to be mainly about the former. LEAP could consider building an evidence base on fathers: how they contribute to creating a positive home learning environment and what can be done to help fathers to support such an environment.

4. Early education and childcare

This chapter considers the role of early education and childcare (EEC) in supporting children's early development. It first considers which outcomes EEC can influence and the national policy framework that reflects the evidence base on the role of EEC. The chapter then considers inequalities in EEC participation and the importance of EEC relative to other factors that influence children's development in the early years. The chapter concludes by considering how EEC can support children's outcomes and the implication of the findings for LEAP.

4.1 The importance of early education and childcare

Numerous studies in the UK and elsewhere have shown the importance of good-quality EEC in improving language and literacy, numeracy and other cognitive outcomes in the early years. Research has also shown the positive impact of good EEC on boosting children's confidence and social, emotional and physical outcomes. We also know from the evidence that some of these benefits (e.g. language, literacy and numeracy) can be long-lasting and still evident when children enter secondary school (Sammons et al., 2007; Sim et al., 2018).

In addition, it has been found that EEC settings can play an important role in motivating and supporting parents to engage in shared reading activities with their children (Law et al., 2018; Siraj-Blatchford and Siraj-Blatchford, 2010). As discussed earlier, shared reading can be very important in supporting children's language development (Asmussen et al., 2018).

The large and consistent body of evidence on the important role that EEC can play in supporting children's early development is reflected in government support for EEC. In England, the Labour government (in power 1997-2010) saw expanding EEC provision and take-up as key to tackling child poverty and promoting equal life chances. It introduced 15 hours of free provision for all three- and four-year-old children and for the 20% most disadvantaged two-year-olds, as well as a range of other EEC initiatives (La Valle et al., 2014). While the governments that followed reduced EEC funding as part of an austerity programme, they reiterated a commitment to EEC as a way of promoting social mobility. They expanded the free entitlement for two-year-olds (to the 40% most deprived children) and increased to 30 hours the free entitlement for most three- and four-year-olds with working parents³ (Gambaro et al., 2014; La Valle et al., 2014; Paull and La Valle, 2018).

4.2 Inequalities in take-up of early education and childcare

While the evidence shows that participation in EEC is particularly beneficial for disadvantaged children, take-up among these children is lower than it is among other children. The English government publication that monitors EEC take-up shows that lower than average participation levels are associated with high area deprivation levels, low family income and non-working households (Department for Education, 2019). Other research has also highlighted low EEC participation among looked-after children, disabled children and those with special educational needs (SEND), and the barriers these children can face in accessing EEC (Cheshire et al., 2011; Mathers et al., 2016). A recent study has found that take-up of the free entitlement for disadvantaged two-year-old children is still lower than average among children from ethnic minorities and families where English is a second language. Take-up of the entitlement is also particularly low in major metropolitan areas. The study suggests that families' cultural and linguistic characteristics play a role in explaining low take-up among some groups. Take-up also appears to be more limited in areas where there is insufficient provision of places. The study concluded that ensuring adequate provision of places and understanding how to reach out to communities with lower than

³ For this scheme, working parents are defined as those who earn or expect to earn the equivalent of working 16 hours each week at the national minimum or living wage. This currently equates to earnings of £125.28 a week (or around £6,500 per year) for parents aged 25 or older. In two-parent families, both parents must meet these criteria to be eligible. If one or both parents have an adjusted net income over £100,000 in the current tax year, they are not eligible for the scheme (Paull and La Valle, 2018).

average take-up could significantly boost participation in the two-year-old entitlement (Teager and McBride, 2018).

The programme that has recently extended the EEC entitlement for three- and four-year-olds from most working families to 30 hours a week (see above) could potentially have unintended consequences that could adversely affect disadvantaged children. The evaluation of this scheme has shown that it is more likely to benefit better-off families and more advantaged children, as these families are more likely to be eligible and apply for the scheme (Paull and La Valle, 2018). As eligibility for the scheme is based on parental employment, it excludes some of the most disadvantaged children and could have the unintended consequence of contributing to widening the education gap between these children and their more advantaged peers (La Valle and Lloyd, 2019). The implications of the scheme for SEND children has also been noted, as very few are benefiting from the new policy. This is partly because many are not eligible, but also because of non-inclusive practices, as settings are struggling to offer extended hours to SEND children, even though the number of children involved is very small (Lloyd and La Valle, 2019). Finally, there is evidence that the 30 hours scheme is underfunded, and this could undermine the quality of provision and also the quantity, if settings close because they become financially unviable (La Valle and Lloyd, 2019). Currently there is no indication that the government may review the 30 hours scheme to deal with some of these issues, but action locally (e.g. sufficient SEND funding to early years settings and outreach work to increase awareness and participation) could help to deal with some of its possible negative effects.

4.3 Relative importance of early education and childcare

As with other influences on early child development discussed earlier, it is very difficult if not impossible to determine the impact of EEC versus other factors that affect children's outcomes in the early years, particularly given that the impact of EEC can be dependent on its quality and quantity (discussed in the next section). We know from the evidence that regardless of their background, all children benefit from EEC (Melhuish and Gardiner, 2018; Sammons et al., 2007). However, EEC can be particularly beneficial for disadvantaged children, with Melhuish and Gardiner (2018) claiming that it is key to narrowing the gap in development and attainment between disadvantaged and their more advantaged peers.

We have seen earlier that a combination of a positive home learning environment and EEC can be particularly beneficial for children (Siraj-Blatchford and Siraj-Blatchford, 2010), but EEC can have a positive impact independently of the home learning environment (Melhuish and Gardiner, 2018; Sammons et al., 2007). A review (Siraj-Blatchford and Siraj-Blatchford, 2010) claims that the home learning environment has a greater impact on children's cognitive development than the quality of the early education setting, but this finding was based on a single and now dated longitudinal study.

4.4 How early education and childcare can support children's development

The evidence on what works in supporting children's early development by providing EEC has focused on quantity and quality.

4.4.1 Quantity

The investment of public funding in EEC reflects a high degree of consensus among policy makers, experts and researchers that EEC is beneficial for children's early development. However, there is less consensus and consistent evidence on how much EEC should be provided and when. The evidence on the benefits (or disbenefits) for children of starting EEC before the age of two are not clear, as the evidence is inconsistent. There is more evidence and consensus that starting EEC at the age of two is beneficial and that the longer the duration (i.e. number of months), the higher the benefits. However, the impact of the number of weekly hours is disputed. Some studies have found that full-time EEC does not have more benefits for children than part-time attendance.

Other research has found that programmes that combine long exposure and high dosage (i.e. hours per week) had a considerable positive impact on children's cognitive and behavioural outcomes, particularly for children from low-income families (Dartington Service Design Lab, 2018).

4.4.2 Quality

While there is a consensus that quality of provision is key to its effectiveness, quality is measured in different ways and can therefore mean different things. In England, evaluations of major EEC programmes and the two main longitudinal studies that have assessed the impact of EEC have relied on 'process' quality. This is measured using validated tools that assess the interaction between children and EEC staff, the activities children undertake in a setting and how staff meet their individual needs. It is argued that process quality is more proximal to children's experiences and therefore more likely to affect their outcomes, and it has been found to be associated with a range of positive outcomes for children (Melhuish et al., 2015), while its absence has been associated with lack of impact. For example, when the free entitlement of 15 hours for disadvantaged two-year-olds was piloted in England, the evaluation found that it was effective in improving children's language development and the parent-child relationship only in relatively high-quality settings (assessed using measures of process quality). The 15 hours of EEC had no impact on child outcomes, nor on the parent-child relationship in settings of lower quality (Smith et al., 2009).

Research has also explored the impact of 'structural' quality, that is, features of quality linked to staff-child ratios and staff qualifications and training. A small number of children per staff member and staff with a degree or specialised training were found to be associated with positive outcomes for children, as they received considerable individual attention from staff with relevant skills and knowledge. However, the authors also stress that these features cannot be considered in isolation, and all elements of the early years system (including 'process' quality) must be taken into account when assessing EEC effectiveness (Bonetti and Brown, 2018). In other words, small ratios and/or highly qualified staff on their own may not be sufficient to guarantee high quality and the resulting benefits for children.

4.5 Implications for LEAP

Box 4.1 Implications of the findings on EEC

- The evidence highlights the importance of good-quality EEC in supporting a range of children's early outcomes, but it also shows that EEC participation among disadvantaged children is lower than that of their peers. Therefore, as part of its whole-system approach, LEAP could consider addressing potential barriers to children accessing EEC and taking up their free entitlement. The theory of change of the programme and relevant services could indicate how these barriers may be identified and removed.
- While the quantity of EEC that children receive seems important, there is no consensus on the 'ideal' number of hours per week required to support children's outcomes. When considering the impact of the quantity of EEC, the literature does not typically consider parents' views. LEAP may want to be guided by parents on this issue, as they are well placed to judge their children's needs and consider how EEC can support the whole family (e.g. by increasing parents' earning potential, as discussed later).
- The quality of EEC is very important, but views on how this should be assessed and measured vary. LEAP may wish to work with EEC settings and parents to consider what good-quality EEC provision should look like locally and what can be done to support it.

5. Parental physical and mental health

Parents' physical and mental health can have both direct and indirect impacts on children's outcomes. This chapter explores those impacts in the early years by looking at the importance of maternal mental health and the factors that influence it. It then looks at the significance of maternal physical health, before turning to the inequalities underlying maternal mental and physical health and the relative importance of these factors compared to other influences. It concludes by reviewing the evidence on what works to support maternal mental and physical health and the implications for LEAP. The chapter focuses mainly on mothers, reflecting the focus of the literature we reviewed.

5.1 The importance of maternal mental health

The literature suggests that maternal mental health may have a direct impact on children's outcomes, both during pregnancy and post-natally. The potential impact of mothers' poor mental health during pregnancy is widespread, with evidence suggesting that ante-natal mental health problems can negatively influence the physical development of the foetus. This may result in low birthweight, early delivery or increased risk of asthma in later childhood (Dartington Service Design Lab, 2018). Where pregnant mothers experience high levels of stress, this is thought to result in higher levels of cortisol reaching the foetus, which in turn can influence the child's later cognitive development and motor manipulation. Specifically, one study identified in Asmussen et al. (2018) found that maternal depression in pregnancy significantly predicted cognitive delays in infants at 12 months. When stress in pregnant women is high (within the top 15% of the population), this has been found to double the child's chances of later emotional or behavioural problems in early to mid-childhood (Dartington Service Design Lab, 2018). A 2002 longitudinal study cited in Siraj-Blatchford and Siraj-Blatchford (2010) found that after controlling for poverty and factors that affected the parental relationship, poor maternal mental health during early childhood predicted high anxiety and depression symptoms in children at age 14. Links have also been made between maternal depression and premature birth (Bowers et al., 2012).

While a pregnant woman and her child's wellbeing are uniquely aligned during pregnancy, a woman's mental health also has notable influence on her child's outcomes throughout infancy and into the early years. If a woman is suffering from acute stress or depression, this can reduce her ability to care for her child and parent them sensitively (the latter was explored in chapter 2). This is particularly poignant if the woman's health is affected when the child is very young and the need for responsive parenting is high. If a mother's mental health means that she is unable to respond sensitively to her infant's needs, this can undermine the quality of the parent-child attachment relationship in infancy, which in turn can result in a range of poorer outcomes for the child, including cognitive, social, emotional and behavioural problems (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018). Bowers et al. (2012) report that the impacts of poor maternal mental health on the attachment relationship can be seen in children's cognitive development by as early as 18 months.

There are also more indirect impacts of maternal mental health on children's health and wellbeing. For example, if parents are struggling with their mental health, there is a risk that they can be distracted, short-tempered or even aggressive towards their child. When this happens, it can generate anxiety and the production of stress chemicals in the child's brain, which can interfere with their development and ability to learn (Dartington Service Design Lab, 2018). As children get older, the risks shift slightly, and poor maternal mental health is less likely to impact on cognitive development and more likely to impact on a child's social and emotional development (Bowers et al., 2012). Asmussen and Brims (2018) report that the extent of the impact of maternal depression on children is linked to how severe and long-lasting the depression is. When a woman's mental health is affected relatively briefly, the impact on her child is minimal. However, the impact increases when a woman's mental health is more severely affected.

5.1.1 Maternal eating disorders

Much of the literature on maternal mental health focuses on stress, anxiety and depression. However, Asmussen and Brims (2018) also report that eating disorders during pregnancy are more common than previously recognised, and match levels found among non-pregnant women. The potential impacts of eating disorders in pregnant women include anaemia and hypertension for the mother, as well as premature birth and either low or excessively high birthweight (depending on the nature of the woman's illness). More extreme cases may result in maternal death (Asmussen and Brims, 2018).

5.1.2 Paternal mental health

There is also evidence suggesting that poor paternal mental health is an issue; however, fewer direct links between a father's mental health and children's outcomes are identified in the literature. Dartington Service Design Lab's review (2018) found that when a father's mental health prevents him from interacting positively with his child, this can result in a lower-quality attachment, fewer shared activities and the potential for later conduct and psychiatric problems for the child.

5.1.3 Factors that influence maternal mental health

Poor maternal mental health is relatively prevalent, with evidence suggesting that around one in four women in the UK experiences mental health problems during pregnancy (Dartington Service Design Lab, 2018). A range of factors increase this risk, and top of this list is economic hardship; the poorest 20% of the UK population are twice as likely to be at risk of developing mental health problems in the perinatal period as those on average incomes (Dartington Service Design Lab, 2018). Other factors that can influence maternal mental health (identified by Dartington Service Design Lab, 2018 and Asmussen and Brims, 2018) include:

- Previous mental health issues.
- The nature of the mother's relationship with her partner.
- Lack of social networks or social isolation.
- The presence of unresolved trauma.
- Substance abuse.
- Unplanned/unwanted pregnancy.

While there is little evidence about the protective factors for mothers' mental health, Bowers et al. (2012) suggest that strong networks for parents can help to protect against poor outcomes for children. Specifically, they suggest that when mothers' social networks are more extensive, they tend to praise their children more and be less controlling than mothers whose social networks are not as strong.

5.2 The importance of maternal physical health

The literature on the way maternal physical health affects infants and children focuses largely on three key risk factors: maternal consumption of harmful substances, preterm birth and maternal age. These are explored briefly below.

5.2.1 Consumption of harmful substances

There is considerable evidence that foetal exposure to drugs or alcohol can be very harmful. When maternal consumption is more extreme, this can result in birth complications and conditions such as foetal alcohol spectrum disorders (FASDs) and foetal alcohol syndrome (FAS), impaired cognitive performance in childhood and lower academic performance in adolescence (Asmussen et al., 2018; Asmussen and Brims, 2018). There is also evidence that mothers who drink heavily during pregnancy are more likely to continue drinking once the child is born. Post-natally, the risks of continued excessive drinking include increased risk of sudden infant death

syndrome (SIDS) and child abuse and neglect (Asmussen and Brims, 2018). Smoking during pregnancy has also been shown to have harmful effects on children, since it can result in increased risk of premature birth (Asmussen et al., 2018).

A UK study found that that 75% of pregnant women indicated that they drank at least one alcoholic drink per week and 53% reported drinking more than two per week in the first trimester. A minority (11%) reported engaging in what is termed 'risky drinking behaviour' in the first trimester, although this is not defined (Asmussen and Brims, 2018). However, they suggest that there are challenges associated with measuring the real prevalence of alcohol consumption, since women are less likely to disclose harmful levels of drinking.

5.2.2 Preterm birth

Preterm birth has been shown to carry risks to children's cognitive development, and the Millennium Cohort Study (MCS) suggests that that there is a direct link between gestational age at birth and children's competencies at ages three, five and seven (Asmussen et al., 2018). Specifically, links have been drawn between birth at less than 32 weeks and impairments in children's numerical understanding. There are also risks to children's language development. Asmussen et al (2018) state that:

It is thought that initial language delays in premature children may be related to disruptions to the development of the auditory cortex, which is responsible for children's hearing and phonological awareness. ... Children are able to discriminate sounds in the womb. A preterm birth may therefore disrupt this process by exposing the infant to sounds not typically heard in the womb, while simultaneously decreasing his or her exposure to the mother's voice and other important ambient sounds. (p.179)

5.2.3 Maternal age

Links have been drawn between maternal age and children's outcomes. Mothers at either end of the age spectrum carry more risk. At the lower end, young mothers may be more economically disadvantaged or lack the experience or ability to make healthy life choices. At the higher end, age carries a range of risks for mother and child (Dartington Service Design Lab, 2018), including gestational diabetes, pre-eclampsia and congenital abnormality. Analysis of the Millennium Cohort Study identifies the advantages of having children between the age of 30 and 40. The children of mothers who had their first child between the ages of 30 and 40 were found to have higher vocabulary scores at the age of five, compared with children born to mothers under 30, even when maternal education, relationship status and household income were controlled for (Asmussen et al., 2018).

5.3 Inequalities relating to maternal mental and physical health

As we have seen, there are clear inequalities in relation to maternal mental health, with evidence suggesting that levels of poor mental health are higher in poorer socio-economic groups. Bowers et al. (2012) suggest that the stressors that are risk factors for poor mental health are also more likely to affect low-income families. They point to a study conducted in the US which concluded that those on low incomes were more likely to experience stressful reactions (including irritability or anger, feelings of sadness and low energy or motivation), than their counterparts on higher incomes. Bowers et al. (2012) concluded that:

This leaves parents less resilient and the stress can account for a significant proportion of the difference in outcomes for children from different socioeconomic groups. (p.47)

The evidence therefore suggests that poor maternal mental health is likely to be a significant problem among the population that LEAP serves, which encompasses families who experience high levels of deprivation.

The review did not include sources that explicitly identified inequalities in parental physical health.

5.4 The relative importance of maternal mental and physical health

As we have seen, maternal mental and physical health can have notable impacts on infants and young children both pre- and post-natally. While these impacts are important, the evidence suggests that maternal mental and physical health are more distal factors (Dartington Service Design Lab, 2018) that have less impact on children's outcomes than the parent-child relationship or economic situation. For example, in relation to maternal depression, Asmussen et al. (2018) found that high income could act as a protective factor against the potential negative effects of maternal depression and that the impact of maternal depression did not greatly increase the negative outcomes of children already suffering high levels of economic disadvantage. However, while maternal mental and physical health may have less direct impact on children's outcomes than other factors explored in this review, they should still be considered as of primary importance in securing the outcomes and wellbeing of children in their early years.

5.5 Supporting maternal mental health

The evidence on what works in supporting maternal mental health focuses largely on depression. Asmussen and Brims (2018) report that there is now good evidence to support universal screening for depression before, as well as after, childbirth. This conclusion was based on a comprehensive systematic review, which considered the efficacy of commonly used screening instruments, referral systems and treatments.

The evidence on the effectiveness of interventions to prevent and reduce maternal depression in the perinatal period is somewhat limited; however, the literature highlights some good and promising programmes. For example, there is good evidence that psycho-social (e.g. non-directive counselling) and psychological (e.g. cognitive behavioural therapy) interventions delivered in the perinatal period can help to prevent post-natal depression (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018). The literature (Asmussen and Brims, 2018; Axford et al., 2015; Dartington Service Design Lab, 2018) also reports promising evidence for the following:

- Stepped-up midwifery or health visiting care tailored to a woman's needs based on assessments using depression screening tools.
- Intensive home visits provided by a midwife or nurse, such as the Family Nurse Partnership and Mind the Baby.
- Telephone-based peer support.
- Web-based programmes involving established therapeutic approaches (e.g. cognitive behavioural therapy) and therapist contact.
- Yoga during pregnancy.

There is inconclusive evidence on the effectiveness of alternative therapies (e.g. acupuncture, massage, bright light therapy) and mindfulness training (Dartington Service Design Lab, 2018).

It is noted that there is very limited evidence of interventions to support fathers with mental health problems (Dartington Service Design Lab, 2018).

5.6 Supporting maternal physical health

Reflecting the findings on key areas of maternal health that affect children's early development, the evidence of what works focuses on interventions relating to the consumption of harmful substances, and these are discussed first. We then briefly discuss interventions relating to maternal age.

5.6.1 Consumption of harmful substances

NICE recommends that maternity services should routinely monitor pregnant women through carbon monoxide tests to identify and refer smokers to specialist support (quoted in Asmussen and Brims, 2018 and Dartington

Service Design Lab, 2018). There is good evidence to support the use of psychosocial interventions (e.g. cognitive behavioural therapy, counselling) to reduce smoking during pregnancy, which are particularly effective when combined with incentives (Asmussen and Brims, 2018; Dartington Service Lab, 2018). Incentive-based programmes were found to be particularly effective among socially disadvantaged women when monetary incentives were high.

The use of social media and peer support in smoking cessation were described as promising but untested (Dartington Service Lab, 2018). There are also a number of factors that can influence smoking cessation in pregnancy, including a partner's emotional and practical support. Lack of support and practical help from health professionals is also cited as a barrier to smoking cessation in pregnancy (Dartington Service Design Lab, 2018).

The evidence on effective programmes to tackle substance misuse in pregnancy was reported to be weak. This is partly due to the variability of the evidence base on treatments for the general population. Moreover, it is common for these treatments to have slow and uneven progress (i.e. with relapses), which is unsuitable for pregnant women, who need to give up quickly and have no relapses (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018).

5.6.2 Maternal age

Interventions relating to maternal age focus on reducing teenage pregnancy. A review of early years intervention (Dartington Service Design Lab, 2018) argues that sex education and sexual health services alone are not sufficient to reduce teenage pregnancy. They must be provided alongside early childhood and youth development interventions that tackle social disadvantage.

5.7 Implications for LEAP

Box 5.1 Implications of the findings on parental health

- While maternal health is a more distal influence on young children's outcomes than the parent-child relationship or a family's economic situation, it is nevertheless an area that benefits from early intervention. Support for women from the ante-natal period in mitigating the impact of poor mental health (e.g. depression) and physical health (e.g. smoking and substance abuse) may have considerable benefits for women and children. LEAP's programme-level theory of change and relevant services should therefore consider maternal health as a key area of focus.
- Screening is recommended for two of the most common maternal health problems, depression and smoking in pregnancy, as identification is key to effectively tackling these problems. There is then a good evidence base of what works to help mothers deal with these health issues. LEAP could therefore incorporate in the theory of change of the programme and relevant services the identification and referral processes for maternal depression and smoking in pregnancy.
- The evidence base on what works in relation to maternal substance abuse is not strong. LEAP may want to invest resources in identifying and testing robust approaches for dealing with a health issue which affects a small number of mothers, but potentially has negative consequences for children's early development.
- Once again, we must point out the lack of evidence on fathers and the need for a better understanding of how their health may affect their children's early development, and on what can be done to support fathers who need help.

6. Child nutrition

Adequate nutrition is vital for healthy child development, including their learning and later achievement at school, their physical development, cognition and behaviour. This chapter explores the importance of infant and child nutrition, looking first at the evidence relating to breastfeeding, before turning to early childhood nutrition and the factors that influence it. It then explores the inequalities underlying child nutrition, the relative importance of nutrition, what works in supporting childhood nutrition, and the implications of the evidence for LEAP.

6.1 The importance of nutrition

6.1.1 Breastfeeding

There is a long-standing body of evidence that identifies breastfeeding as having a range of advantages for children, from infancy to childhood. Known benefits of breastfeeding include: an enhanced immune system; protection against later obesity; and protection against a range of illnesses, including sudden infant death syndrome, ear and lung infections, asthma, diabetes, gastrointestinal disorders and leukaemia (Dartington Service Design Lab, 2018). Some evidence also suggests links between breastfeeding in infancy and school readiness and higher intelligence in later childhood. These benefits have been shown to be enhanced for preterm infants who are breastfed for a minimum of two months (Asmussen et al., 2018; Dartington Service Design Lab, 2018). However, the exact extent of the benefits of breastfeeding on children's cognitive outcomes once other factors (such as mother's education level) are taken into account is disputed (Asmussen and Brims, 2018).

The benefits of breastmilk are thought to come from both its unique composition (specifically the fatty acids, which may help the production of white matter in an infant's brain) and the opportunity that breastfeeding provides for mothers and infants to form a positive attachment (Asmussen and Brims, 2018).

The body of evidence around the benefits of breastfeeding for mothers is equally convincing. Known advantages include a decreased risk of breast and ovarian cancer. The benefits for mothers have been shown to increase with the length of breastfeeding. Asmussen and Brims (2018), for example, point to studies that find that rates of breast and ovarian cancer are significantly lower in mothers breastfeeding for six months or more, when compared to those who breastfed for fewer than six months.

The evidence reviewed suggests that breastfeeding rates in the UK are among the lowest in Europe. While around 80% of mothers start out by breastfeeding, there is a noticeable drop-off in the following weeks, and only 34% of mothers still breastfeed after six months (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018).

6.1.2 Early childhood nutrition

Nutritional deficiencies in early childhood can result in a range of health issues, including poor oral health, anaemia and vitamin D deficiency – which has been linked to a recent resurgence in rickets. Poor nutrition in the early years can also result in challenges for children at school. These include poor cognitive outcomes and behavioural issues, as well as the child's general ability to concentrate, engage and take part in activities (Dartington Service Design Lab, 2018).

6.2 Factors influencing breastfeeding

Breastfeeding take-up and duration are linked to a range of factors. Socio-cultural factors include: the influence of a mother's immediate role models and support network; whether she has been exposed to breastfeeding before; and, the extent to which she is prepared for and supported in her decision to breastfeed. The level of support that a mother receives if feeding becomes challenging is also a factor, as is her level of comfort about feeding in front of others, and particularly in public places. There may also be pragmatic challenges surrounding a mother's availability to breastfeed if she returns to work or education. In some cases, the relative convenience or

availability of infant formula may play a role. For some mothers, the decision about whether to breastfeed is determined by physical influences such as the mother's health post-natally, as well as her milk supply and whether or not she experiences any breast infections (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018).

6.3 Inequalities relating to child nutrition

Clear links have been drawn between early childhood nutrition and low income. The Millennium Cohort Study found that, by age five, children from the lowest income quintile were twice as likely as those in the top income quintile to be obese. Children in the lower income groups were either not breastfed or breastfed for less time, were introduced to solid food earlier and were less likely to be eating breakfast or fruit every day (Dartington Service Design Lab, 2018). During toddlerhood, children from lower-income families are more likely to be eating unhealthy foods, and consequently to have fewer nutrients and suffer from vitamin D and iron deficiency. The link between low income, poor nutrition and health outcomes is attributed to a combination of low access to healthy food, and pressure to buy cheaper, energy-rich foods, as well as cultural and literacy barriers preventing families from accessing healthier diets. Since role modelling healthy eating plays an important part in encouraging young children to eat well, it is likely that poor dietary habits are also passed down through generations (Dartington Service Design Lab, 2018).

6.4 The relative importance of child nutrition

What children eat in the early years has a direct impact on their health and ability to learn and achieve a range of outcomes. Thus it is an important factor and a core area of focus for the A Better Start programme. However, the Dartington Service Design Lab review (2018) considers childhood nutrition to be a more distal factor than, for example, parenting approach or home learning environment. Its relative importance is not discussed in the other literature we reviewed.

6.5 Supporting child nutrition

In this section, we first consider the evidence on what works to support breastfeeding and then other aspects of child nutrition in the early years.

6.5.1 Breastfeeding

There is good evidence on the effectiveness of interventions that can support breastfeeding, in addition to the routine support available in the perinatal period. Examples reported in the literature (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018) include:

- Opportunities to discuss breastfeeding issues during regular ante-natal and post-natal visits.
- Group support on breastfeeding provided by lay people or professionals, which has been found to be effective, particularly on breastfeeding initiation and sustainment.
- Individual programmes with telephone advice from lay people or professionals; these have been shown to improve the duration of breastfeeding.

The evidence base on the effectiveness of providing breastfeeding support in other ways (e.g. via text messaging, web-based) is still very tentative. The evidence on the use of incentives to encourage breastfeeding is not conclusive (Dartington Service Design Lab, 2018).

Some home visiting programmes have proved effective in increasing the duration of breastfeeding, as well as in supporting the introduction of solid foods at the appropriate time and reducing the likelihood that parents use food as a reward or to make a child feel better (Dartington Service Design Lab, 2018).

6.5.2 Child nutrition

Most of the child nutrition interventions focus on preventing or reducing obesity in childhood and do not specifically focus on the early years, unlike other programmes discussed in this report. These interventions were reported to be effective when they were intensive, based on behavioural theories and tailored to families' circumstances, such as the resources available to the family (Dartington Service Design Lab, 2018). The evidence also shows that effective approaches include support to increase physical activity as well as diet, and aim to influence the behaviour of the whole family. Some effective programmes also involve pre-school settings (Dartington Service Design Lab, 2018).

6.6 Implications for LEAP

Box 6.1 Implications of the findings on child nutrition

- The evidence shows that good nutrition affects different aspects of children's early development. It would therefore seem important for good nutrition to be included in the theory of change of the LEAP programme and of relevant services.
- There are a number of interventions that have proved effective in supporting breastfeeding and other aspects of child nutrition. Given that children from poor families are less likely than other children to receive good nutrition, an important consideration for LEAP would be whether (and if so, which) interventions should be made available to all families and which should be targeted at low-income households.

7. Family relationships

While there are myriad ways in which family relationships can influence children in the early years, the literature suggests that there are two key elements that have greater impact. These are the quality of the interparental relationship and domestic violence, both of which are summarised in this chapter. The chapter then looks at inequalities relating to family relationships, the relative importance of family relationships as a factor that influences child outcomes, what works to support and strengthen family relationships and the implications of this evidence for LEAP.

7.1 Why family relationships are important

This section presents the findings on: the quality of the interparental relationship; domestic abuse or intimate partner violence; and child abuse and neglect.

7.1.1 The quality of the interparental relationship

A large body of evidence identifies the nature and quality of the relationship between parents as having a direct impact on child outcomes, whether parents are together or separated. Harold et al. (2016), identify six challenges that children experience as a result of interparental conflict, defined as being where 'parents/couples engage in conflicts that occur frequently, are expressed with animosity/acrimony, and/or are poorly resolved' (p18):

- Externalising problems (including behavioural difficulties, aggression and anti-social behaviour).
- Internalising problems (including withdrawal, fearfulness, anxiety, low self-esteem and depression).
- Academic problems, which in many cases may stem from lack of sleep caused by interparental conflict in the home.
- Poor physical health.
- Social and interpersonal relationship problems.

The review suggests that children of all ages can suffer as a result of a breakdown in the interparental relationship, with children as young as six months exhibiting symptoms of distress, including an elevated heart rate, when their parents engage in hostile exchanges. Young children may also demonstrate distress by acting out, crying, withdrawing or attempting to intervene. The review also draws a link between the quality of the interparental relationship and the nature of parenting practices, suggesting that when the relationship between parents results in persistent, hostile and unresolved conflict, this can lead to more negative parenting by both parties (Harold et al., 2016).

7.1.2 Domestic abuse or intimate partner violence

When domestic abuse or intimate partner violence (IPV) occurs during pregnancy, there are a number of risks to both mother and infant, including reduced participation in ante-natal care, higher risk of miscarriage, preterm birth, low birthweight, foetal injury and maternal or neo-natal death (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018). Predictably, domestic abuse is associated with stress or poor mental health, which, as outlined in chapter 5, can have adverse outcomes for parents and children. Evidence also suggests that pregnancy can increase the chance of IPV, with a third of women who experienced domestic abuse citing pregnancy as the first time that it occurred (Asmussen and Brims, 2018).

Exposure to domestic abuse in infancy and toddlerhood can result in delays in children not reaching developmental milestones (Asmussen and Brims, 2018). It causes emotional distress, with infants being especially vulnerable, as they are not able to process or escape from the abuse. Frequent or extensive distress can also undermine the attachment relationship. Negative impacts on children's development can include

language impairments and learning disabilities. Domestic abuse can have a negative impact on children's relationships and social and emotional skills, self-esteem and mental health. Many of these issues can also last well into adolescence and adulthood (Dartington Service Design Lab, 2018).

7.1.3 Child abuse and neglect

The evidence suggests that physical abuse in infancy is often deliberate, with parents hurting their child when they are angry by hitting or shaking them. Asmussen and Brims (2018) point to studies that have shown that infants are seven times more likely to be intentionally killed than children of other ages. The negative impacts of an infant being maltreated in their first year of life include later issues with physical, cognitive and emotional development. Dartington Service Design Lab (2018) suggest that:

Adverse effects of child maltreatment can last well into adulthood, manifested in an increased risk of behavioural, emotional and social problems (including delinquency, depression, suicide ideation, chronic illnesses and post-traumatic stress disorder). (p.110)

The evidence suggests that maternal drug and alcohol misuse can be risk factors for child abuse and neglect (Asmussen and Brims, 2018). Intimate partner violence can also be a predictor for child neglect. Other factors associated with the higher risk of child neglect include: single parenthood, limited support networks, high numbers of children in the household and parental mental health problems (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018). It should be noted, however, that the incidence of child neglect among these groups tends to be low.

7.2 Inequalities relating to family relationships

Harold et al. (2016) suggest that the interparental relationship is:

...a central mechanism, filter, or conduit through which earlier family stresses (economic or social stress, parent mental health etc.) affect both parenting and children's long-term psychological outcomes. (p.30)

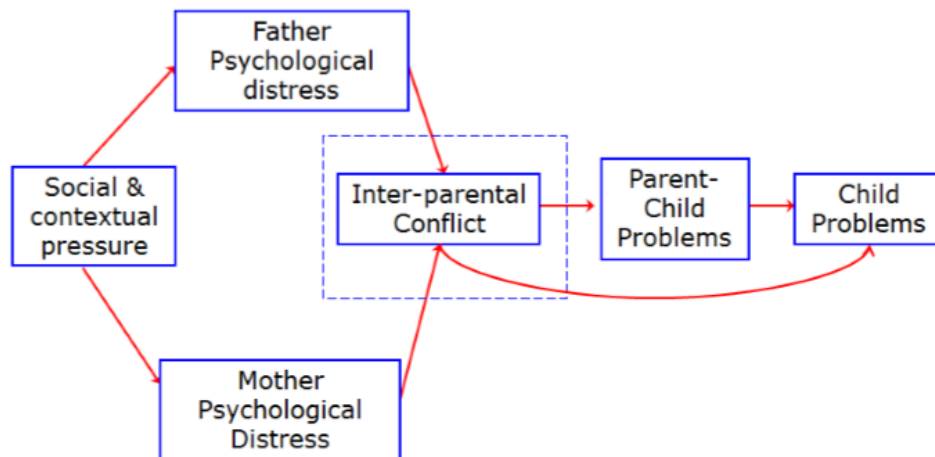
This implies that additional stresses, including those brought about by poor economic circumstances, are likely to impact on family relationships and ultimately child outcomes.

Low income is also identified as a key risk factor for childhood abuse and neglect. Dartington Service Design Lab (2018) suggests that there are direct and indirect reasons for this. Poverty directly affects family relationships through not being able to create positive environmental conditions for the family. Indirectly, low income carries risk factors such as increased parental stress and poor neighbourhood conditions, which can in turn impact on the quality of family relationships (this is discussed further in the next section).

7.3 The relative importance of family relationships

There is clear evidence that the nature of family relationships can have a strong impact on children's outcomes. Harold et al. (2016) point to the interrelated nature of influences and suggest that family relationships play a fundamental role in the wider ecosystem of factors that influence child outcomes. They suggest that since none of the various direct and indirect influences operates in isolation, what is important is the way in which they all interact. For example, the stress of living on a low income can negatively affect parents' mental health, which can undermine the interparental relationship, the approach to parenting and the attachment relationship, and all these can in turn impact on children's cognitive and socio-emotional development. The authors suggest that while the parent-child relationship has previously been seen as the core focus for mitigating against these various factors, there is merit in focusing on the quality of interparental relationships, since this can interact with other family stresses and impact on parenting practices and therefore child outcomes. Figure 7.1 outlines the process model identified by Harold et al. (2016).

Figure 7. Process model of family stress effects on children's mental health problems: the central role of the interparental relationship*



*Taken from Harold et al. 2016, p.30

We have seen also that violence in the home can have strong negative effects on children's development, and again, it is very closely linked to both the relationships between parents and the parents' relationships with their child(ren). So, while family relationships are considered a more distal factor (Dartington Service Design Lab, 2018), they are a hugely important consideration in understanding and improving early childhood development.

7.4 Supporting family relationships

In this section, we first consider interventions to improve the interparental relationship and reduce parental conflict, and then discuss interventions that focus on preventing and reducing domestic abuse or intimate partner violence. There is also a large body of evidence of interventions to prevent and deal with child abuse and neglect, but this was outside the scope of this review.

7.4.1 Parental conflict

An extensive review of the evidence of interventions that aim to improve the relationship between parents found a number of programmes that were effective in different circumstances. For example, programmes that target conflict management and communication showed improvements in parenting and child outcomes. The programmes reviewed were found to be effective at key transition points (e.g. becoming a parent) and in high-risk contexts (e.g. divorce, domestic violence). The review concluded that supporting the couple's relationship in the early years may have long-term positive impacts on children's mental health and future life chances. This kind of help can also support patterns of positive relationship behaviour across generations. The authors argue that the strength of the evidence suggests the need for a more systematic and direct focus on the couple's relationship and enhancing couple relationship skills in parenting interventions (Harold et al., 2016).

7.4.2 Domestic abuse

Recent reviews of early years interventions have found that routine screening for domestic abuse during ante-natal care, in primary health care settings and in emergency departments increases disclosure and identification of domestic abuse (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018). A review of early intervention in domestic violence (Guy et al., 2014) has found that the combination of the use of domestic violence screening tools in routine enquiries and training to increase practitioners' awareness of domestic abuse can result in a considerable increase in detection rates. The review cites a programme in New York which

introduced domestic abuse screening among pregnant women and training for staff. The programme resulted in a threefold increase in the rate of domestic abuse disclosure over a two-year period. Similarly, child abuse identification rates in maternity clinics in a London hospital increased substantially when routine enquiry by midwives about domestic violence and abuse was introduced. This study recommends a uniform approach to routine screening, with clear pathways for the provision of relevant services.

The evidence on the outcomes from domestic violence programmes after identification and referral was reported to be weak. However, some home visiting programmes can reduce exposure to domestic violence and abuse in the short term, if they include a specific component on domestic abuse. Clinic-based psychological support has also been found effective in reducing the risk of domestic violence (Asmussen and Brims, 2018; Dartington Service Lab, 2018; Guy et al., 2014).

7.5 Implications for LEAP

Box 7.1 Implications of the findings on family relationships

- There is evidence to suggest that supporting the quality of the interparental relationship in the early years can be as important as supporting the parent–child relationship, since one can influence the other and have considerable benefits for children. LEAP could therefore consider whether this area of intervention should be part of its whole-system approach and include it in its programme theory of change and that of relevant services.
- Recent evidence on the effectiveness of screening for domestic violence suggests that LEAP could consider introducing processes for identification and referral as part of routine visits (e.g. ante-natal visits). However, the evidence on the effectiveness of domestic violence programmes is weak and these require further testing.

8. Families' economic situation

It is hard to disentangle families' economic situation from the range of influences on early child development that have been discussed so far, since the effects of all of them are enhanced when families experience disadvantage. This section therefore pulls together some of the impacts of disadvantage that have already been identified above, as well as highlighting some additional impacts of living in poverty on children's outcomes. Overall, the evidence suggests that the impacts of low income fall broadly into three categories: impacts on children's health and wellbeing; impacts on children's cognitive and language development and school readiness; and impacts on children's social and emotional development. These categories are explored in turn. The chapter then looks at the relative importance of families' economic situation on children's outcomes before exploring the evidence on what works to support families with a poor economic situation. It concludes by exploring the implications for LEAP.

8.1 The impact of low income on children's health and wellbeing

Children from poorer backgrounds experience a range of factors that could influence their health and wellbeing compared to their more advantaged peers. These impacts are evident as early as the neo-natal period, and links have been identified between mothers in lower socio-economic groups and poor neo-natal care, substance abuse, poor nutrition during pregnancy and smoking (Bowers et al., 2012). Children born to poorer families are also more likely to be of a lower birthweight, less likely to be breastfed, be breastfed for less time (Bowers et al., 2012; Dartington Service Design Lab, 2018), and less likely to receive their immunisations on time (Bowers et al., 2012). As they get older, children from poorer backgrounds are also more likely to experience poor dental care, serious illness and long-term disability. Early death is also more likely for more disadvantaged children (Bowers et al., 2012).

Disadvantaged families are more likely to live in inadequate housing: if cold, damp or mouldy, this could have direct impacts on their health; if overcrowded, it can impact on their mental health (see chapter 9 on environmental influences for more discussion on this).

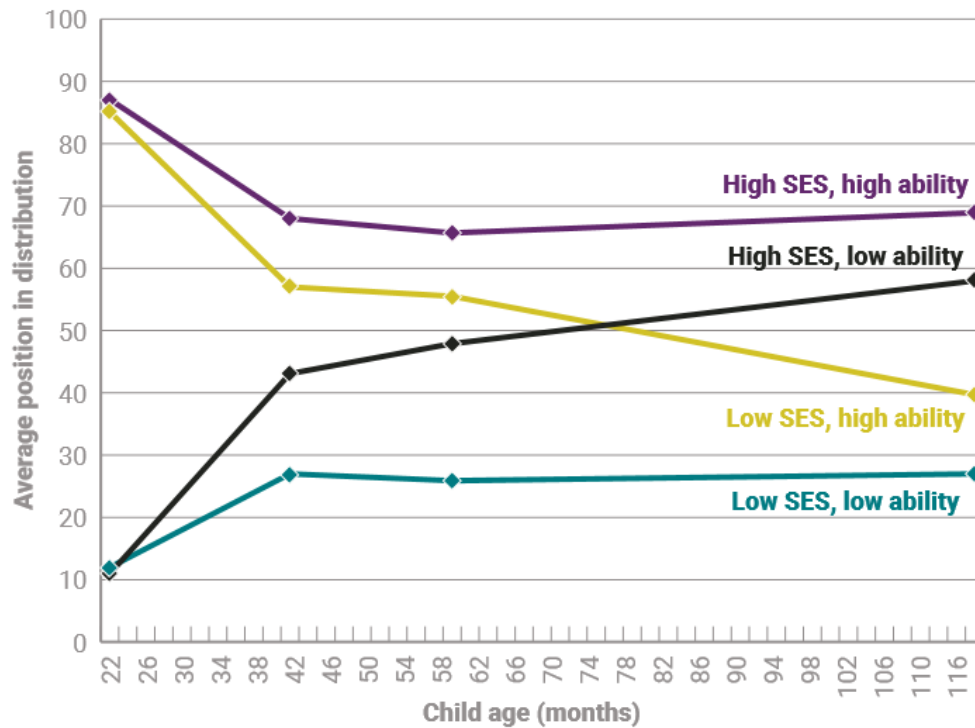
8.2 The impact of low income on children's cognitive and language development and school readiness

Social disadvantage has been shown to have significant impacts on children's cognitive development and school readiness. These impacts are both direct and indirect. Direct impacts come about because children from low-income households may have less access to high-quality educational opportunities and material resources, such as toys and books. Indirect impacts might occur because parents experiencing disadvantage are more likely to have lower levels of education than more affluent parents and to be less able to provide appropriate cognitive stimulation for their child(ren) (Asmussen et al., 2018). Furthermore, parents with financial worries are at risk of being more stressed than parents with a higher income (Asmussen et al., 2018). It has been found that children from poorer families have lower IQ scores on a range of tests and have lower levels of cognitive development from the early years onwards than their more affluent peers (Bowers et al., 2012). Asmussen et al. (2018) explore analysis of the Millennium Cohort Survey (MCS), which indicates that family income is the strongest predictor of children's vocabulary and understanding of objects at age three. The same study indicates that the relationship between family hardship and child cognitive outcomes was stronger than it was for family hardship and child behavioural outcomes (Asmussen et al., 2018). This gap in cognitive scores is likely to translate to lower academic attainment and other educational outcomes as children get older (Asmussen et al., 2016).

The graph in figure 8.1 is based on work from Feinstein in 2003 and shows how the cognitive scores for four groups of children cross over in the middle, suggesting that socio-economic status (SES) has a greater impact on children's development than their ability. Children who were identified as having a 'high SES' but low ability outperform both high- and low-ability children from 'low SES' backgrounds. Thus, when low, SES is a risk for children's cognitive outcomes but when high, it can act as a protective factor. It is important to note that the link

between deprivation and children's outcomes is not deterministic. However, the risk of poor outcomes decreases as family SES increases (Dartington Service Design Lab, 2018).

Figure 8.1 The development of the cognitive skills of children of high and low ability, by socio-economic group*



*Reproduced from Law et al., 2017 and based on data from Feinstein, 2003

There is also considerable evidence highlighting the link between social disadvantage and children's language ability. Studies show that children's speech is most influenced by, and mirrors, their parents, with between 86% and 98% of children's words derived from their parents' vocabularies (Asmussen et al., 2016). However, children who grow up in disadvantaged families hear fewer words and are exposed to more limited vocabulary than children in higher income groups (Law et al., 2017). They are also less likely to access the sorts of cognitive stimulation that encourage language development at home. This includes having less access to books and toys, and being read to less. Children from lower-income households are also more likely to experience irregular bedtimes, which lead to reduced sleep and in turn can compromise language development (Dartington Service Design Lab, 2018). Evidence also suggests that there are not only differences in the range of words that children across income groups hear at home, but in the ways in which parents talk to their children. Parents who have a higher level of education or have professional backgrounds are more likely to engage their children in meaningful dialogue and language-rich activities, including asking questions and responding to their children's speech, than parents with low income or a lower educational level (Asmussen et al., 2016; Law et al., 2017).

The impact of coming from a low-income household on children's language is evident as young as 18 months, and continues through the pre-school years and into formal education (Asmussen et al., 2016; Law et al., 2017). The literature suggests that the same disparities are evident when it comes to children's early numeracy development, with an income-related gap detected at the time children enter school and remaining throughout their school years (Asmussen et al., 2018).

8.3 The impact of low income on children's social and emotional development

Children from poorer families are more likely to struggle with their social and emotional development than their peers. This includes being more likely to have behavioural problems than children from more affluent families (Bowers et al., 2012; Dartington Service Design Lab, 2018). Evidence also suggests that the development of key social and emotional characteristics, such as self-esteem, self-control, perseverance and motivation, are also correlated with families' economic circumstances (Dartington Service Design Lab, 2018). At age three, 16% of children from the lowest income group have been shown to have social and emotional difficulties compared to just 2% of children from the highest income group. This gap is echoed at age five (Bowers et al., 2012; Dartington Service Design Lab, 2018). Rates of poor mental health and diagnosed mental illness are also higher among children from lower-income groups (Bowers et al., 2012).

The Dartington review (2018) explores evidence that indicates that poverty has a direct impact on the development of children's brains, affecting the areas that support memory, emotional regulation and higher-order cognitive functioning, as well as those that support language and literacy. Part of this impact is thought to be caused by the levels of stress that are experienced by some lower-income families. Factors that can generate stress, such as low financial resources, low social support and challenging relationships, are at risk of being higher in low socio-economic groups. Mental health issues are also inversely correlated with income. Bowers et al. (2012) suggest that stress is distributed unevenly across the population, with lower-income families experiencing a disproportionate share. The added stress factors that low-income parents can experience (which are thought to include having a higher number of emergencies, experiencing more fractious relationships and having less support) can affect parents' resilience, which may have knock-on effects for their children's development (Bowers et al., 2012).

8.4 The relative importance of families' economic situation

As we have seen, there is a clear socio-economic gradient to all the factors explored in this review, and thus families' economic situation can be seen to underpin children's developmental, cognitive and social outcomes. However, it is also important to recognise that the relationship between economic situation and the other factors explored is not deterministic (Dartington Service Design Lab, 2018). Rather, a poor economic situation increases the *risk* of negative outcomes for children. There is, however, some degree of consensus within the literature that economic circumstances are a bigger predictor of children's outcomes than some other factors. For example, Asmussen et al. (2018) found that high income could act as a protective factor against the negative impacts of maternal depression and that the impact of maternal depression did not greatly increase the negative outcomes of children already suffering high levels of economic disadvantage. The authors concluded that:

...early experiences of family hardship predict poor cognitive outcomes throughout early development.
(Asmussen et al., 2018, p.67)

However, it is also the case that some of the other factors explored in this review have been shown to help mitigate economic circumstances. As identified in chapter 3, there is convincing evidence from a range of sources that positive parental involvement in early learning has a greater impact on children's wellbeing and achievement than any other factor (Axford et al., 2015; Dartington Service Design Lab, 2018; Siraj-Blatchford and Siraj-Blatchford, 2010). Specifically, analysis of Growing Up in Scotland (GUS) found that in children aged 34 months, the influence of the home learning environment on cognitive development was stronger than socio-economic status, parent education or income (Dartington Service Design Lab, 2018). Therefore, while families' economic circumstances have considerable direct and indirect impacts on children's outcomes, and as such should remain a core area of focus for LEAP, they do not determine children's outcomes and should be understood as part of a wider ecosystem of influences.

8.5 Support for families to improve their financial circumstances

While low income is associated with most inequalities in the early years, interventions to improve families' financial circumstances were not discussed in the early years literature we reviewed. This reflects the fact that tackling low income and poverty is largely seen as the domain of national economic policy. However, there can be scope (albeit limited) to support low-income families in improving their financial circumstances.

The provision of employment services in children's centres has been piloted in the past and has provided promising evidence that it can support parental employment and employability among low-income families, although there was no conclusive evidence that it could improve families' financial circumstances (La Valle et al., 2014). The Troubled Families programme provides employment services to help parents into employment, and some local authorities include financial advice for families in their Troubled Families offer, for example, in relation to entitlement to various benefits and debt management (Ipsos MORI, 2018). However, again there is no robust evidence to indicate what contribution these elements of the programme have made to families' financial circumstances.

Another area of intervention where the evidence of impact on families' financial circumstances is more promising relates to removing barriers to accessing early education and childcare services among parents who want to enter paid employment or improve their employment circumstances (e.g. get a better-paid job, develop new skills, get a higher level of education). The literature consistently shows that the main barriers are: the cost of early education and childcare; services that are not sufficiently flexible to meet working parents' needs (e.g. in terms of opening times); and insufficient early education and childcare places in some areas (Paull and La Valle, 2018). These problems are particularly acute in London; for example, a study of women who recently had a baby found that lone mothers in the capital were considerably less likely to return to paid employment than their counterparts in the rest of the country. This seemed to be due to the combination of two factors: provision in London is the most expensive in England, and families in the capital are less likely to have access to informal childcare provided by grandparents and other family members (La Valle et al., 2008). The evaluation of the 30 hours free childcare entitlement (discussed earlier) found that the policy had considerable financial benefits for some families. However, it also showed that there is much that needs to be done locally to ensure that families benefit from the programme, for example, more effective promotion and outreach strategies, and ensuring that the 30 hours are genuinely free, as some services say they have to charge parents because the scheme does not cover their costs (Paull and La Valle, 2018).

8.6 Implications for LEAP

Box 8.1 Implications of the findings on families' economic situation

- While families' economic situation does not determine children's outcomes, it does increase the risk of poor outcomes across a range of areas. Therefore, it might be helpful for LEAP to use families' economic circumstances as a lens through which all programme activities should be understood. Adverse circumstances associated with low income can make it harder to 'parent', and this should be clear in any assumptions that are made in the programme's and relevant services' theory of change.
- While there is limited scope for a local programme to improve the financial circumstances of low-income families with young children, there are areas of intervention that LEAP could consider as part of its whole-system approach, for example, collaboration with financial advice services, employment agencies and educational institutions to help parents to increase their income. It could also consider supporting low-income families to access (subsidised) childcare and ensuring that childcare services meet the needs of parents who work or study.

9. Environmental and community influences

There is notably less evidence on the role of environmental and community factors on children's outcomes than other factors in the literature we reviewed. This may be in part because environmental factors are considered to have less influence than some of the other factors discussed earlier. However, it may also be because it can be hard to separate environmental influences from other influences, particularly families' economic circumstances. This chapter explores the limited evidence that was uncovered about environmental and community influences in the early years and the inequalities relating to these influences, before considering their relative importance for children's outcomes and the implications for LEAP. Unlike other chapters, this does not include a section on what works, as there was no discussion in the literature we reviewed about interventions to address environmental and community factors (e.g. access to parks and outdoor facilities, shops supporting healthy eating).

9.1 The impact of poor housing on children's outcomes

The literature that does exist suggests that poor housing is a core environmental factor which can have negative impacts on children's outcomes. Where children are living in housing that is cold, damp or has mould, for example, there are a range of potential health issues, ranging from asthma and respiratory problems to poor sleep, which can have a knock-on effect on children's school attendance and achievement. Overcrowded housing or living in temporary accommodation can also have impacts on children's learning, since they may have a higher level of absence or frequently move schools. And there are clearly negative physical health, mental health and developmental consequences for children in homeless families (Dartington Service Design Lab, 2018). Evidence also suggests that children from poor families are more likely than their peers to be exposed to toxins such as lead, which has been shown to have a negative effect on cognitive performance and reduced auditory recognition ability. These children are also more likely to be exposed to tobacco smoke, which contributes to impaired cognitive function and is evident through lower scores in intelligence and achievement tests (Dartington Service Design Lab, 2018).

9.2 The impact of wider community influences on children's outcomes

Beyond housing, there are wider environmental influences, such as high levels of air pollution, that have an impact on children. Some environmental factors, such as access to parks and playgrounds, can actively support children's health and social development (Axford and Barlow, n.d.). Another positive factor is access to healthier and affordable food. This includes food that is available at parents' places of work as well as local supermarkets. Having access to healthy and affordable food has been found to be associated with

...higher or improved dietary behaviours, higher or improved attitudes towards fruit and vegetable consumption, healthier food purchasing, and positive associations with weight-related health outcomes. (Dartington Service Design Lab, 2018, p.134)

Environmental influences also impact indirectly on children because of the effects they have on their parents. For example, there are more negative factors present in some neighbourhoods that have been shown to make parents' lives harder. These include having less access to positive facilities such as green spaces, playgrounds, public services and affordable shops, as well as high levels of violence.

9.3 Inequalities relating to environmental and community influences

There are clear inequalities related to children's environmental circumstances. It is families with poorer economic circumstances who are more likely to live in the crowded, damp or otherwise unhealthy conditions that can negatively affect children's mental and physical health. Evidence reviewed by Dartington Service Design Lab (2018) suggests that social inequalities between neighbourhoods have a direct link to variability in children's early development. They specifically point to evidence that shows a link between disadvantaged neighbourhoods and poor developmental health in children.

The evidence also suggests that there are also direct and indirect impacts on children from low-income families in relation to their lived environment. As we have seen, poor economic circumstances can mean that families do not have the means to access healthy, appropriate accommodation or to live in an area that supports healthy behaviours. This can have direct impacts on children's cognitive, health and social outcomes. However, the impact of living in poor accommodation or deprived neighbourhoods can also negatively impact on parents' physical or mental health. This may affect their parenting or relationship with their children and thereby also indirectly impact on children's outcomes (Dartington Service Design Lab, 2018).

9.4 The relative importance of environmental factors

While there are clear links between the environments in which children spend their early years and their later outcomes, environmental factors are considered to be more distal factors in relation to children's development (Dartington Service Design Lab, 2018). However, again it is the interplay between environmental factors and others in this review that is of significance. It is not just the direct impacts of living in poor housing or a disadvantaged neighbourhood but also the impact that this has on influences that are considered particularly important in relation to children's outcomes. As the Dartington Service Design Lab review concludes:

Neighbourhoods matter for early child development; it is the social aspects of neighbourhood that matter most; but the effects on child development are largely explained by the association with aspects of parent well-being and parenting. (2018, p.136)

9.5 Implications for LEAP

Box 9.1 Implications of the findings on community and environmental influences

- There is limited evidence on the influence of environmental factors on children's outcomes. However, what evidence there is suggests that although environmental factors can have a direct impact on children's outcomes, their impact is just as likely to be felt through their influence on parents' relationships with each other and with their children. Therefore, it is suggested that LEAP focuses on the potential for environmental factors to impact on other key influences on children's outcomes (such as parents' mental and physical health, the parent-child relationship and the home learning environment) and consider how these impacts could be mitigated through the programme and its individual services.

10. A place-based approach to reducing inequalities in the early years

LEAP uses a place-based, collective-impact framework and approach. This means that LEAP brings together people and organisations to share information and work in mutually reinforcing ways to meet the unique needs of local children and families, and achieve place-based collective impact on:

- Improving young children's diet and nutrition.
- Developing their social, emotional, language and communication skills.
- Reducing inequalities.

This approach is used by LEAP because children's lives are shaped by multi-level and interactive influences, including family, education and care, and social and cultural contexts. The areas that LEAP focuses on and examples of LEAP outcomes and services are outlined in chapter 1 (see table 1.1).

This chapter starts by providing an overview of what a place-based approach involves and its defining features. It then considers the kind of systems change this approach involves, and what questions one should address in assessing whether LEAP is supporting the kind of systems change required to achieve its goals.

10.1 What is a place-based approach?

An historical review of place-based interventions (Nabatu and Evans, 2017) points out that the rationale for this approach has varied over time and programmes, and this is reflected in the different ways in which this approach has been described. However, in the more recent literature, two defining characteristics are consistently associated with a place-based approach. First, its rationale is based on the theory of collective impact as a way of addressing deep-rooted social inequalities. Second, it is based on the assumption that spatial inequality (i.e. inequality in economic and social indicators across geographical areas) and social inequality are inextricably linked (Crimeen et al., 2017; Kingston et al., 2016; Larsen, 2007; Miller et al., 2012; Nabatu and Evans, 2017; Pies et al., 2016).

Looking at the first assumption, the theory of collective impact, its proponents argue that considerable resources are wasted on 'isolated impact', i.e. trying to develop independent solutions to address major social problems, as funders believe that a 'cure' for these problems is waiting to be discovered, 'in the way medical cures are discovered in laboratories' (Kania and Kramer, 2011, p.38). As complex social problems arise from an interplay of many different influences, it then follows that addressing these problems requires collective solutions, i.e. different organisations coming together to collectively understand the nature of the problem and identify solutions. As Kania and Kramer explained:

...reaching an effective solution requires learning by the stakeholders involved in the problem, who must then change their own behavior in order to create a solution. Shifting from isolated impact to collective impact is not merely a matter of encouraging more collaboration or public-private partnerships. It requires a systemic approach to social impact that focuses on the relationships between organizations and the progress toward shared objectives. (2011, p.39)

In relation to the second assumption, the spatial dimension, we find that many initiatives underpinned by the theory of collective impact are described as 'place-based' because of their focus on considering how the features of a 'place' need to change to tackle inequalities. The nature and scale of the transformation envisaged by collective impact means that initiatives usually need to be developed and tested on a small scale, with the size of the population and geographical space covered not dissimilar to the LEAP areas.⁴ Like LEAP, they also typically

⁴ For example, Steps to Success, an initiative that aims to reduce youth crime in Northeast Denver in the US, covers an area of 4.5 square miles with a population of approximately 30,000 and a very high level of disadvantage (Kingston et al., 2016). The Harlem Children's Zone in the US, which tackles child poverty, covers a 97-block area with high poverty levels and provides support to around 8,000 children and 5,000 adults (Miller et al., 2012). The Education Action Zones were funded in England in

focus on areas with a high level of disadvantage (Crimeen et al., 2017; Kingston et al., 2016; Miller et al., 2012; Nabatu and Evans, 2017).

While place-based initiatives may start small, they can be designed to provide a platform for introducing larger-scale changes. Indeed, proponents of this approach would argue that collective impact is designed to bring about transformational and sustainable change on a large scale (Nabatu and Evans, 2017). This ambition is reflected in A Better Start, which aims to see change beyond the wards where the initiative is being delivered, with local health and social care systems, early education provision, local authority services and the voluntary sector all prioritising healthy development in the early years (National Children's Bureau, 2019). However, the failure to explore the legacy of place-based initiatives is identified as a major gap in the literature, which leaves many questions unanswered about place-based working, for example, changes that are more (or less) likely to be sustainable after the funding comes to an end and what effective exit strategies look like (Nabatu and Evans, 2017).

10.2 What are the defining features of a place-based approach?

As discussed above, a place-based initiative is underpinned by a collective approach to addressing complex issues through interventions defined at a specific geographical scale. There is consistency in the literature about four key features that distinguish place-based initiatives from other approaches used to tackle social problems, such as single services or programmes (Crimeen et al., 2017; Kingston et al., 2016; Larsen, 2007; Nabatu and Evans, 2017). These features are shown in figure 10.1 and discussed in the rest of the section.

Figure 10.1 Defining features of a place-based approach



10.2.1 Focus on predictors of inequalities

Place-based initiatives are designed to reduce the circumstances and processes that produce unfair differences (e.g. in health and education), by addressing the predictors of inequalities within the areas in which they are implemented (Crimeen et al., 2017; Kingston et al., 2016; Larsen, 2007; Pies et al., 2016). For example, in a review of health place-based initiatives, Crimeen et al. (2017) found that over a third did not have any explicit

1998-2000 to improve educational achievement in very disadvantaged areas; each zone covered between 12 and 20 primary and secondary schools (Miller et al., 2012).

health outcome targets and were instead designed to address the social determinants of health. This might include focusing on housing improvements, such as heating and insulation, and improvements to transport systems to reduce accidents (Larsen, 2007). Another example is Steps to Success (Denver, USA), an initiative that aims to reduce youth crime and which provides early years parenting programmes, as positive parenting in the early years can help to reduce involvement in crime as children grow up (Kingston et al., 2016). It has been argued that place-based initiatives cannot succeed if they are not firmly focused on the predictors of inequalities. For example, Education Action Zones were introduced in England to improve educational achievement in disadvantaged areas. Miller et al. (2012) argue that they failed to achieve this goal mainly because they focused on narrow outcomes reflecting targets of mainstream education agendas (e.g. to increase pupil attainment), rather than the predictors of poor educational achievement.

10.2.2 A shared vision, reach and resources

Place-based initiatives are meant to work collaboratively across different organisational borders and levels within organisations to develop a shared vision and harness their combined reach and resources to realise this vision (Crimeen et al., 2017; Kania and Kramer, 2011; Kingston et al., 2016; Larsen, 2007; Pies et al., 2016). Some place-based initiatives are credited with bringing together partnerships of very diverse stakeholders, where the need for better partnership and more integrated working had been repeatedly identified but had never been achieved. For example, Strive is an initiative in Cincinnati, USA, that aims to improve educational performance. Strive includes 15 Student Success Networks, each focusing on different types of activities, such as early childhood education, after-school activities and tutoring. It is argued that it had positive results because local leaders decided to abandon their individual agendas and worked together to co-ordinate improvements at every stage in a child's life from 'cradle to career' (Kania and Kramer, 2011).

It is stressed in the literature that no one essential to the success of the initiative should be left out (Nabatu and Evans, 2017), as that can undermine effective implementation. For example, in the Education Action Zones mentioned above, teachers were implicitly, and sometimes explicitly, framed as part of the problem, as their perceived ineffectiveness was a key reason why the Zones were set up. Miller et al. (2012) argue that this was a key weakness of the initiative, which undermined its effectiveness. Another example of the potential exclusion of stakeholders was highlighted in a review that Coventry City commissioned to inform a radical rethink of local services and highlight the conditions required for collaborative working. The review authors warned about a tendency in the city to work with an 'inner circle' of partners and exclude others, particularly private-sector partners, as the sector has not traditionally been involved in the public realm (Billiald and McAllister-Jones, 2015).

10.2.3 Community engagement

Community engagement is considered essential to achieve the kind of transformational and sustainable changes that place-based initiatives aim to achieve (Billiald and McAllister-Jones, 2015; Miller et al., 2012; Nabatu and Evans, 2017). Community engagement has been described as willingness to work on equal terms with residents in the community and ultimately transferring control to the community (Nabatu and Evans, 2017). Billiald and McAllister-Jones (2015) talk about the system challenging itself to put community residents at the centre of the decision-making process.

Box 10.1 Examples of community involvement

The **REACH US** programme in Australia used a community-based participatory approach to design community coalitions to act across its three main interventions: building strong community-based coalitions; focusing on policy, systems and environmental improvements; and culturally tailored interventions (Crimeen et al., 2017).

My Health Matters in the UK (Stoke-on-Trent) used community participatory research to build community partnerships that identified, prioritised and designed intervention(s) related to specific health inequalities. The community was further involved through involving local residents in the delivery of the interventions (Crimeen et al., 2017).

The literature also highlights the challenges of meaningful community involvement (Crimeen et al., 2017; Nabatu and Evans, 2017). For example, the focus on disadvantage carries the risk of negative stereotyping, which can be disempowering for and resented by the community. For example, applications for the Education Action Zones (mentioned above) highlighted parents' shortcomings to support their bids. It is therefore argued that within the initiative, parents were seen as passive recipients of services, rather than critical advocates for their children (Miller et al., 2012). Other challenges reported in the literature include: reaching beyond 'the usual suspects' to a representative group of community stakeholders; lack of confidence, technical expertise and organisational capacity; disillusionment ('seen it all before'), resistance or even hostility from the community (Nabatu and Evans, 2017).

10.2.4 Evidence-based

Place-based initiatives should be evidence-based and are typically conceived as 'test and learn', meaning that at every stage of development and implementation, evidence is used to:

- Assess and prioritise needs.
- Select programmes and services.
- Monitor delivery and users' feedback.
- Assess the impact on long- and short-term outcomes.

Place-based initiatives also require a collective commitment to using learning from the evidence to evolve and adapt the initiative (Crimeen et al., 2017; Kingston et al., 2016; Nabatu and Evans, 2017).

The central role played by evidence is reflected in some place-based initiatives, where the research team is fully embedded in the infrastructure, rather than being an externally commissioned service. For example, Better Start Bradford has set up an Innovation Hub to carry out an experimental birth cohort study. The study seeks permission from families in the wards covered by the initiative to follow them through linkage of their health, education and social care data and to monitor participation in Better Start Bradford programmes. This means that data routinely collected by services and programmes can be used to provide information on families' baseline characteristics and needs, take-up of support, and outcomes for children and families (Dickerson et al., 2019). A number of place-based initiatives in the US involve close collaborations with local universities and research organisations, and it has been noted that this can provide a cost-effective way of ensuring that robust evidence remains at the heart of all decision making (Kingston et al., 2016).

However, the literature also highlights the difficulty of evaluating place-based initiatives and system change, as solutions are emergent and in flux, and the context of and relationships within places change. It is also particularly challenging to assess impact on longer-term outcomes, as it may take many years for these to change (Crimeen et al., 2017; Kania et al., 2018; Miller et al., 2012; Nabatu and Evans, 2017).

10.3 A place-based approach and systems change

The transformational, sustainable and long-term changes that place-based initiatives expect to achieve require systems change, which has been described as:

...bringing attention to shifting the power dynamics at play, identifying where people are connected or disconnected from others who must be part of the solution, exposing the mental models that inhibit success in policy change, and investigating the ways in which the foundation's internal conditions help or hinder external aspirations—this is the nature of successfully changing systems. (Kania et al., 2018, p.18)

Box 10.2 Examples of contemporary approaches to implementing systems change

HeadStart is a National Lottery initiative to improve the mental health and wellbeing of 10-16-year-olds across six local authority-led partnerships. Catalyst for systems change across all six sites include: an increased emphasis on prevention or early intervention; a shift to a joined-up system; a shift to a shared or embedded language, understanding or approach; focus on 'what works'; influencing practice, policy and commissioning; and emphasis on co-production (National Children's Bureau, 2019).

Fulfilling Lives is a National Lottery initiative that aims to improve the support available for people with multiple and complex needs in 12 partnerships. Common themes across the partnerships are: developing the role of co-production within systems change; embedding a culture of systems change thinking within wider partners; improving workforce development; introducing a trauma-informed and strengths-based approach; improving access to services; and service transitions (National Children's Bureau, 2019).

Camden Model of Social Work is a partnership between the Tavistock Foundation and the London borough of Camden to improve children's social services through a systems-change approach. The aim is to encourage shared accountability within and between services, and to support practitioners to think about the whole family. There is a focus on workforce development as a driver for change through the introduction of a new model of supervision, which includes group mentoring to encourage shared learning and responsibility. The new model is being embedded across the system, including practitioners, the senior leadership team and commissioners (National Children's Bureau, 2019).

As illustrated in the quote above, systems change is very complex, and this raises two key questions for place-based initiatives: how do systems change and how do we know it? In the rest of the chapter, we explore the three phases involved in systems change illustrated in figure 10.2, and highlight the questions that need to be addressed to assess whether LEAP has the key characteristics of a place-based approach, that is, whether:

- It focuses on the predictors of inequalities.
- It is evidence-based.
- It is co-produced by all stakeholder organisations and in collaboration with the families and the wider community.

Figure 10.2 How do systems change and do we know it?



10.4 Define the boundaries of the system

The importance of defining the boundaries of a system is stressed in the systems change literature. Where boundaries get drawn is potentially very significant and requires open conversations to ensure that the boundaries are meaningful to all stakeholders (Abercrombie et al., 2015; Nabatu and Evans, 2017). As Foster-Fishman and Watson explain:

The act of defining a problem is potentially the most transformative step in a change effort ... clarifying the targeted problem by understanding its root causes and determining who and what constitutes the 'system.' Engaging diverse stakeholders in this exploration is an essential part of systems change; through such engagement targeted problems become clarified and potentially renamed as stakeholders learn from each others' perspectives. Importantly, drawing boundaries around who to include/exclude in this analysis connotes value to stakeholder roles and determines which perspectives dominate and which ones are silenced. (2012, p.505)

The literature shows that place-based initiatives must strike a careful balance between being innovative in tackling deep-seated social problems, while being pragmatic and focusing on what they can realistically change. An extensive review identified a potential weakness of place-based initiatives that had cast their net too wide as having goals inconsistent with resources (Nabatu and Evans, 2017).

As LEAP's ultimate goal is to reduce inequalities in early child development, the boundaries of its system could potentially be very wide. As discussed in chapter 1, the national programme suggests that the Bronfenbrenner Ecological System model (see figure 1.1) may be helpful in considering systems change in the context of A Better Start. The model is seen as useful because it highlights the components of the wider system within which a child exists, and the complex interactions between these components (Axford and Barlow, 2013; National Children's Bureau, 2019). The model highlights how wide the net could be cast, to cover not only families' and children's services and agencies, but also, for example, housing, employment and transport. A key challenge for LEAP is recognising everything that contributes to its system, while ensuring that its boundaries are sufficiently narrow to be able to focus on the areas it can realistically change.

Box 10.3 Questions LEAP should consider in order to understand whether the boundaries of its system and how they were defined support systems change

The literature suggests that LEAP should consider the following questions about the boundaries of its system:

- What are the boundaries of LEAP?
- Who was involved in defining these boundaries, who was excluded from this decision and why?
- Has evidence informed decisions about these boundaries, and if so, what kind?
- How are the LEAP boundaries communicated, for example, through its partnerships (who is in and who is out), services and programmes, and what is and is not measured?
- Are there mechanisms for reviewing these boundaries, for example, in response to changing local needs, stakeholders' views or new evidence?

10.5 What planning for systems change looks like

Place-based initiatives usually require complex and sophisticated planning, as they aim to work collaboratively across different organisations and organisational levels, as well as with the community. As Kania and colleagues explain:

...systems change ... requires exceptional attention to the detailed and often mundane work of noticing and acting on much that is implicit and invisible to many ... Making big bets to tackle a social problem without first immersing yourself in understanding what is holding the problem in place is a recipe for failure. (2018, p.18)

The literature (Dartington Service Design Lab, 2018; Kingston et al., 2016) points to two key elements that are consistently associated with successful systems change and could therefore be monitored to assess whether systems are changing as expected. These are the processes for gaining an in-depth understanding of needs at both the community and individual level, and for deciding which programmes and services to provide.

10.5.1 Assessing needs

As indicated above, systems change must be underpinned by a very good understanding of the causes of the problems one is trying to tackle, and this means assembling evidence on local needs. The question here is how do we know whether a needs assessment is robust and comprehensive, and reflects local needs?

Needs assessments often rely on analysis of routinely collected administrative data (e.g. on health, education and social care) (Crimeen et al., 2017; Messenger and Molloy, 2014). While this is a cost-effective way of getting an overall picture of local needs, reliance on indicators that have often been designed nationally can make it hard to identify issues, groups and needs that are specific to a local area. Indeed, the literature suggests that a considerable flaw of many place-based interventions is that they do not seem to address area-specific problems (Crimeen et al., 2017). In addition, existing outcome indicators may have been designed with little or no involvement of 'service users', and therefore may not comprehensively capture their needs and views, as illustrated by the examples in box 10.4.

Furthermore, the focus on the social determinants of inequalities must be reflected in the needs assessment, which must therefore include data on the causal links between the problems being addressed and their determinants or predictors (Crimeen et al., 2017; Larsen, 2007). For example, place-based initiatives to reduce youth crime include assessment of risks and protective factors in the early years that can impact on behaviour in adolescence (Kingston et al., 2016).

Another issue to consider is whether the needs assessment is relevant and useful to all stakeholder organisations, for example, to forecast demand for and target services (Messenger and Molloy, 2014).

Box 10.4 Involvement of users in determining outcome indicators

A recent **outcomes framework for children's social care services** in England, developed through consultation with those who deliver and use these services, looks very different from the outcomes framework used by the Department for Education (DfE) to monitor children's social care services. The former focuses on the views and experiences of services and whether they make a difference in children's and families' lives, while the DfE framework largely focuses on processes (e.g. whether care plan reviews are done within certain timescales). Consultations with a wide range of stakeholders found strong support for the newly developed framework, which is believed to provide a much more effective way of monitoring whether children's social care services are meeting the needs of children in need and their families than the DfE framework (La Valle et al., 2019).

Steps to Success is an initiative that aims to reduce youth crime in Northeast Denver in the US. Within this initiative, surveys of representative samples of local parents and children have played a key role in identifying and prioritising needs (e.g. risks and protective factors identified by children and families) that may not be identified from other sources, such as administrative data. For example, the Positive Recognition Campaign was set up because the survey found that the majority of children did not believe that their school and community recognised their positive behaviour, and over a third did not think that their positive behaviour was recognised at home. Future surveys will monitor whether these statistics change. The Safe2Tell anonymous reporting system was set up because the surveys indicated that parents and children needed a safe way to report safeguarding concerns. The system was reported to have led to an increase in reporting of safeguarding concerns, and intervention in over 2,000 attempted suicides; it also addressed over 400 tip reports on weapons involving young people (Kingston et al., 2016).

Community-level needs assessment can go a long way in identifying families and children who may need targeted support. However, the literature highlights that this must be complemented by individual screening and assessment of individuals to identify particular risks that require targeted support. For example, as noted in earlier chapters, there is evidence to suggest that effective intervention to deal with smoking during pregnancy and domestic abuse in the early years requires screening of women when they attend routine health appointments (Asmussen and Brims, 2018; Dartington Service Design Lab, 2018).

A recurrent issue in children's services is the way that lack of consistency between and within agencies in processes for identifying the need for targeted early intervention means that problems become more entrenched and difficult to address. Very high-level needs can be missed even further down the line, with dire consequences for children, as reflected, for example, in the substantial increase in children taken into care in the past decade (Messenger and Molloy, 2014). The use of shared standardised assessments by all relevant agencies and services is therefore key to ensuring that those who may require the highest level of support are reached and their needs are identified and met (Messenger and Molloy, 2014).

Box 10.5 Identifying needs for targeted intervention

An example from **Steps to Success** illustrates how widening use of shared screening can make a difference. The initiative considerably widened (voluntary) 'problem behaviour' assessments of children and young people by implementing a standardised youth violence screening tool in new settings, such as schools and primary health care settings that children and young people attend for routine health checks. This led to an increase from 20% to 48% of children and young people in the community who were assessed to be at risk of becoming involved in violence and who were offered targeted support (Kingston et al., 2016).

Box 10.6 Questions LEAP should consider in order to understand whether its planning activities support systems change

The literature on the role of needs assessment in the planning process suggests that the following questions should be considered by LEAP:

- What evidence has informed the LEAP needs assessment (e.g. national versus local data, data provided by different stakeholder organisations)?
- What 'story' is the needs assessment telling about early intervention and the predictors or determinants of inequalities in early childhood locally?
- To what extent is the LEAP needs assessment 'owned' by families and the community?
- To what extent is the LEAP needs assessment 'owned' and used by all stakeholder organisations, e.g. do they see it as 'their' needs assessment too and use it for planning purposes?
- To what extent are stakeholder organisations using shared processes and tools to reach and identify families who need targeted support?
- Are there mechanisms for regularly reviewing the needs assessment, e.g. in line with new research evidence, local evaluation findings, changing local needs?

10.5.2 Planning programmes and services

Having identified the local population's needs, the next stage involves identifying the services and programmes that can effectively address these needs. The literature suggests that systems change involves changing the ways that resources are utilised and building on the assets of all stakeholders. This should mean an increase in resources invested in achieving the goals of the initiative, and organisations pulling their resources together to make more effective decisions based on evidence on the effectiveness of services and programmes (Dartington Service Design Lab, 2018; Messenger and Molloy, 2014; National Children's Bureau, 2019).

The Early Intervention Foundation has developed a maturity matrix to assess progress in achieving integrated early intervention in the early years, which outlines how funding and commissioning decisions should change to achieve this. For example, early progress is reflected in early intervention in the early years becoming a priority for funding, with discussions about the possibility of pooling or aligning budgets, while 'maturity' is reached when there has been a significant shift in pooled resources to fund early intervention in the early years. In relation to commissioning, early progress is reflected in an aligned outcomes framework but separate commissioning, while maturity is reached when commissioning is formally integrated and there is a single commissioner accountable for early years services (Early Intervention Foundation, 2014). The maturity matrix also describes progress in relation to users' engagement, which goes from a basic level when families are consulted, to a mature level when families are:

...routinely involved in co-producing strategy, commissioning and reviewing services. Engagement is business as usual. Families also challenge local arrangements and lead change. (Early Intervention Foundation, 2014, p.2)

In addition to more pooled resources being invested in the goals of the initiative, systems change means making decisions about services and programmes that are shaped by robust evidence of their effectiveness (Dartington Service Design Lab, 2018; Messenger and Molloy, 2014; National Children's Bureau, 2019). Being evidence-based means selecting programmes with high-quality evaluations and being committed to testing programmes that do not have a strong evidence base (Asmussen et al., 2018; Dickerson et al., 2019; Messenger and Molloy, 2014). The literature suggests that key criteria for selecting suitable evidence-based programmes should include:

- **Suitability:** based, for example, on what problems it addresses, who is the target population, what is the expected impact, what is the mode of delivery, in which settings is the programme delivered, what is the cost. Place-based initiatives need to consider whether a programme offers opportunities for local ownership and capacity building (Kingston et al., 2016). Initiatives with culturally diverse populations also need to consider 'cultural competency', i.e. whether it has been tested with diverse population groups and/or with groups prevalent in the community where it is to be implemented (Kingston et al., 2016).
- **Effectiveness:** based on how robustly the programme has been tested. For example, the Early Intervention Foundation rates programmes on a four-point scale, from the lowest level for programmes at an early development stage which have not been tested yet, to programmes with some promising evidence based on limited testing and programmes that have been fully tested, but in a limited context (Asmussen et al., 2018).

Being evidence-based also means having a plan to evaluate whether a programme works as intended. The programme's rating should shape evaluation plans, but even highly-rated programmes require an evaluation to ensure that they work as intended in the specific context in which they are being implemented (Asmussen et al., 2018). For example, Better Start Bradford is delivering several programmes with a strong evidence base (e.g. Incredible Years, Family Nurse Partnership), but these, alongside other less-tested programmes, are being evaluated to ensure fidelity to the original programme design and to test their effectiveness in their specific context (Dickerson et al., 2019).

Selecting evidence-based programmes and developing evaluation plans require technical skills that most people in stakeholder organisations and the community do not have. It is nevertheless important to consider how they can be involved in these decisions, for example, by providing feedback on the experiences of delivering or receiving these programmes, and by including them in groups set up to advise and/or oversee the evaluative work (Dickerson et al., 2019).

Challenges or tensions can arise between, on the one hand, being community-led and developing solutions being determined by the community and on the other, being evidence led, as the two may not always join up. However, this is an issue that was not discussed in the literature we reviewed.

Box 10.7 Questions LEAP should consider in order to understand whether its planning activities support systems change

The literature on planning services and programmes suggests that LEAP should consider the following questions in relation to decisions about funding, commissioning and being evidence-led:

- Is there evidence of a growing investment of resources in early years evidence-based interventions in the LEAP areas?
- Is there evidence of a shift in pooled or aligned budgets to pay for early years evidence-based interventions in the LEAP areas?
- Is commissioning of early years services being integrated, e.g. is there joint commissioning and/or a move to a single commissioner accountable for early years in the LEAP areas?
- How are early years programmes selected by LEAP and stakeholder organisations?
- Are there plans for evaluating programmes delivered by LEAP and stakeholder organisations, and if so, what are they?
- Who is involved in shaping and informing the evaluative work carried out by LEAP and stakeholder organisations (e.g. parents and community representative), and how?

10.6 What implementation of systems change looks like

A collective-impact approach requires some key indicators of progress which are monitored consistently at the community level and across all organisations to ensure accountability and that all efforts remain aligned (Kania and Kramer, 2011). This means having a shared measurement framework that is used to monitor progress in meeting these needs. There must be agreement and buy-in from all key stakeholder organisations on the importance of these measurements, and input and agreement from the local community that these measures provide an adequate way to assess progress, which could include progress in achieving community engagement (Crimeen et al., 2017; Kania and Kramer, 2011). The choice of what to measure to assess progress is important because what gets measured and is considered important to assess progress can impact on behaviour and decisions, as illustrated in box 10.8.

Box 10.8 Examples of how what gets measured can impact on measures and decisions

The **Harlem Children's Zones** is an initiative in New York that tackles child poverty by providing a range of health, parenting and education programmes. It has been argued that in this initiative, disproportionate resources are invested in preparing 'borderline children' for school tests, as Wall Street funders want to see some clear-cut and uncomplicated measures of success. While those who run the initiative are aware that this may not be the best use of resources, they feel they must 'play the game' to ensure continued funding (Miller et al., 2012).

Government funding for the **Education Action Zones** was stopped after two years because improvements in educational achievements were not consistent across the Zones and it was therefore concluded that the initiative was not working. This was despite encouraging and more consistent findings about parental engagement, which may have indicated that systems were changing in the right direction (Miller et al., 2012).

Beyond a shared outcomes framework, the literature (Early Intervention Foundation, 2014; Messenger and Molloy, 2014; National Children's Bureau, 2019) describes other delivery features to consider in assessing the effectiveness of place-based interventions, some of which are specific to early years systems. These include:

- Whether the systems for sharing information about families (e.g. a common ID and an integrated electronic system) enable early identification of problems and delivery of early help.
- How operational data collected by different stakeholder organisations is used collectively, for example, to inform service design and workforce planning.
- Whether there is a shared approach to working in a family-centred way. These might be, for example, a model for working with families, a single entry point for families that need help, comprehensive pathways to ensure a smooth journey through the system.
- How well integrated the workforce is, for example, whether there are multidisciplinary and co-located teams in a single management structure, and professional competencies and training have been aligned.
- If and how evaluations (including families' feedback) shape decisions about service and programme delivery.
- Whether community involvement in the provision of early years services has increased; however, it is not clear what this would mean in practice, for example, more local people employed by services and/or a shift from public service delivery to delivery by local community organisations.

Box 10.9 Questions LEAP should consider in order to understand whether its implementation activities support systems change

The literature on the delivery of provision to the intended beneficiaries suggests that the following questions should be addressed by LEAP:

- Is there a shared outcomes framework that all stakeholder organisations have signed up to and 'own'?
- Do families feel that the outcomes framework provides a good way to assess whether local services and agencies meet their needs and engage them in service co-production?
- Are there mechanisms for regularly reviewing the outcomes framework, e.g. in line with new research evidence, local evaluation findings, changing local needs?
- What systems are in place for sharing information about families and operational data?
- Is there a shared strength-based model of working with families or a plan to introduce it?
- What is being done to integrate ways of working of different stakeholder organisations?
- How are the evaluation findings used?
- How is the community involved in service provision?

11. Conclusions and implications for LEAP

11.1 Conclusions

This review has sought to explore the current evidence around what influences child outcomes both in terms of the factors present in a child's life and in relation to the services, interventions and approaches that early years place-based initiatives such as LEAP can undertake. Its aim was to provide an evidence base upon which LEAP can base its revised programme- and service-level theory of change, shared measurement framework and evaluation.

The review has found that there are eight broad factors that influence child outcomes in the early years:

- The parent–child relationship (including sensitive parenting and attachment).
- The home learning environment.
- Early education and childcare.
- Mothers' physical and mental health.
- Child nutrition.
- Family relationships, including the interparental relationship.
- Families' economic situation.
- Environmental and community influences.

Determining the relative importance of these factors on children's outcomes is challenging, since all of them have an impact to some extent and children's outcomes are shaped by the interplay between them. However, the evidence suggests that the parent–child relationship sits at the heart of these factors and that what happens both in terms of the early attachment that is formed between parent and child and the home learning environment that parents provide, is crucial to children's later outcomes.

Families' economic situation provides a lens through which all the other factors can be viewed, since low income both generates some direct impacts for children and can augment the negative impact of the other seven influences identified. However, while poor economic circumstances can increase the risk of poor child outcomes, they do not determine them, and there is evidence that focusing on the parent–child relationship and the home learning environment can, in some cases, mitigate the impact of socio-economic deprivation. This, combined with other evidence about the importance of those early relationships, suggests that parent–child attachment and interaction should be key areas of focus for LEAP. However, they should certainly not be the only ones, and there is considerable merit in also focusing on other high-impact areas. These include: early education and childcare, child nutrition; maternal mental and physical health; and family interparental relationship. The last item has historically not been a primary area for early intervention, but the evidence suggests that it should be considered as one. While evidence of the impact of wider environmental and community influences is less prevalent, there is nonetheless merit in considering these factors in relation to the other influences that this review has explored and as part of LEAP's whole-system approach.

This review also sought to understand which specific groups can benefit from early intervention. The evidence suggests that there are two main reasons why a focus on disadvantaged families is beneficial. First, as this review has shown, children in low-income families experience significant and direct impacts as a result of their families' disadvantage. Second, all the factors identified in this review are enhanced (sometimes significantly) by disadvantage, and the potential impact on children's outcomes of those factors is greater. Taking an approach that not only seeks to work with disadvantaged families, but also aims to focus on the circumstances and processes that produce unfair difference, is also a key component of a successful place-based approach.

The evidence about what works in terms of approaches and interventions suggests that, while universal programmes have their place, they alone are not sufficient to improve child outcomes among disadvantaged children and should be complemented by more targeted and intensive support. A whole-system approach can help with ensuring that families' needs are identified at different stages and an effective support package is provided, which might include both universal and targeted programmes reflecting parents' and children's changing needs in the early years.

The evidence about what constitutes effective place-based approaches suggests that they need to have a shared vision, reach and resources, and that no one who is considered essential to the success of the initiative feels left out of that shared vision. It is also important for the right systems, partnerships and data-sharing partnerships to be in place to ensure that the families who will benefit most from services are identified. Effective place-based approaches are also evidence-based and should adapt iteratively to what evidence and learning is telling them. Robustly assessing local needs is a fundamental part of this process as it helps to ensure that the programme is specific and relevant to the place on which it is focused. This must include assessing community-level needs, as well as individual-level screening, to identify those families who need different types and levels of support. The focus on the social determinants of inequalities must also be reflected in the needs assessment, including data on the causal links between the problems being addressed and their determinants or predictors. Decisions about which interventions and services should be adopted should be shaped by robust evidence about their efficacy too, wherever possible.

However, it is clear that identifying the right families for an intervention is only half the battle. For interventions to be successful, parents must be active agents in the delivery of the services, to boost their confidence and ability to be their children's advocate, as well as their teacher. Evidence therefore suggests that interventions should start with families' strengths and build on those so that parents' confidence and sense of empowerment is maintained. Equally important is the need to maintain parent engagement throughout the process, since evidence indicates that this can be one of the biggest challenges for targeted programmes to overcome. Successful engagement of families in need should therefore be a priority for the implementation of any early years intervention. However, an effective place-based approach needs to go even further, and should ensure that families are fully involved in the co-design and co-production of the overall strategy for the initiative, as well as for individual programmes. Some element of co-delivery by families is also beneficial.

Wider community engagement is also considered integral to an effective place-based approach. The literature we have reviewed suggests that there are notable challenges with doing this well, since it requires a transfer of power to the community, which often represents a cultural shift and can be hard to deliver in practice.

For a place-based approach to be successfully delivered also requires a delicate balance between being innovative in tackling deep-seated social problems, while at the same time being pragmatic and focusing on what the initiative can realistically change. Effective place-based initiatives therefore rely on strong and well-maintained partnerships, as well as a clear understanding about what the initiative is able to fund directly, and which components it should try and influence through its various partnerships within the wider system.

The review has identified some key areas of relevance to LEAP in terms of what works in delivering successful early years services. However, there are some clear gaps in the literature, particularly around the role of fathers, as well as what works to address some of the environmental and community-level factors that have been identified as having an impact on children's outcomes.

11.2 Implications for LEAP

Building on the implications identified in the individual chapters, this section considers some overarching implications for LEAP.

11.2.1 How the evidence has been used so far

- The evidence from this review about the factors that influence child outcomes and the links between them has already been used in the development of LEAP's system map, both in terms of identifying the priority areas and in mapping the strength of the relationship between the various factors. For example, sensitive parenting and attachment has been identified as one of the more important factors, with strong connections to children's social and emotional development and their communication and language development. The links between the high-level factors, such as sensitive parenting and attachment, and the sub-factors that influence them (such as parental confidence and knowledge) have also been made based on evidence from this review alongside input from a range of LEAP staff and partners. As LEAP builds on this map, it should aim to ensure that any changes are as rooted in the evidence as possible.
- The combined evidence from this review, alongside input from workshops, is also helping LEAP to identify the relationship between key areas of intervention and the extent to which they are served by the LEAP initiative. For example: which factors are highly important to child outcomes and are well served; factors that are highly important but less well served; and factors that are less important and over-served. This mapping should allow LEAP to make more evidence-based decisions about service commissioning, as well as about services and programmes that LEAP does not commission but should try to influence.

11.2.2 Implications for the development of the theory of change

- While it is important to focus on interventions that address influences known to be central to child outcomes, just because an intervention is focused on an area known to have a strong influence on child outcomes, does not necessarily mean it is effective. Programmes should be well evidenced, and the evidence base that LEAP already has for the individual services that it and partners deliver should be acknowledged in the development of LEAP's theory of change and shared measurement approach.
- Since the evidence suggests that disadvantaged families require targeted and sustained interventions, as well as more universal support, the theory of change should take into account the links between groups of activities and expected outcomes. For example, it should not be assumed that limited 'light touch' services alone are sufficient to achieve positive outcomes for all families.
- The importance of who delivers interventions, and specifically, their qualifications and skills, demonstrates that LEAP's current focus on workforce development is likely to be beneficial to effective delivery. It is therefore important that this remains a key component of LEAP's strategy and that this is reflected in the theory of change.
- For a place-based approach such as LEAP to work, effective mechanisms are required to identify children and families who need additional support and for engaging them. Identifying and engaging families are important goals that, along with the processes that are needed to underpin them, such as effective partnerships and information sharing, should be reflected in the initiative's theory of change.
- For individual programmes and services to be successful, evidence suggests that working in partnership with families by building on their strengths helps to empower them to engage with a service more effectively. This too should be reflected in the development of the theory of change.
- Part of the process of developing a theory of change is the exploration of unintended negative consequences. One potential issue for LEAP is that, in developing the services that it funds directly, it may unwittingly cross into the terrain of some local statutory services, which then reduce their resources in response. This would have clear implications for the local area, particularly when A Better Start concludes. Considering how to mitigate this and any other identified unintended consequences should be a central part of the development of the shared measurement approach.

11.2.3 Wider implications for LEAP's approach

- LEAP cannot directly intervene in every area. To reach a wide range of families and to tackle a wide range of factors, LEAP needs to be clear about where it is funding services directly and where it is partnering with other organisations to deliver services. Greater clarity on what the respective contributions of LEAP and its partners should be will help LEAP to have a more effective place-based approach.
- Ongoing needs assessment will remain central to LEAP's whole-system approach, and in chapter 10 we have outlined the kind of issues that LEAP needs to consider to ensure this.
- As part of its commitment to evidence and in attempting to create an effective collective-impact model, LEAP should reflect on whether all relevant stakeholders are included in the design and delivery of the initiative and ensure that no one is excluded or feels left out.
- Likewise, LEAP should continue the work that it does to bring the local community into its working model and ensure that this remains a consistent part of its activity to help ensure more effective collective impact. The role that LEAP's parent champions play supports community engagement, since they not only deliver peer support but are used for testing ideas with. However, there may be opportunities to take this further and for LEAP to actively bring a wider range of families (including those most in need of its services) into the design and delivery of the initiative.
- In addition to the evaluation activity that LEAP has planned following the development of its shared measurement system to measure outcomes for children and families, LEAP may also want to consider other indicators of the efficacy (or otherwise) of its systems change approach, as suggested in chapter 10.

Appendix Search strategies

Sources used

- ASSIA
- Australian Education Index
- British Education Index
- ERIC
- International Bibliography of the Social Sciences
- Medline
- OpenGrey
- Social Policy and Practice (SP&P)
- Social Services Abstracts
- Other major NGO websites not covered in SP&P

Objective 1 Child outcomes and predictors

Scope: evidence reviews published between 2010-2019.

Overarching aim: Summarise the evidence on what influences child outcomes in the early years and which outcomes are sensitive to early intervention.

Questions the evidence will aim to address and that will guide the screening:

- What are the key influences of child outcomes in the early years (pre-birth to age 3)?
- Which of these outcomes are sensitive to early intervention?
- Which specific groups can benefit from early intervention in the early years?
- What works to improve child outcomes in the early years (e.g. which activities, approaches and programmes)?

Summarise the evidence exploring the four areas of work LEAP is focusing on (i.e. maternity, communication & language, diet & nutrition, social & emotional development), whether they are sensitive to early intervention and to what extent they can play a role in reducing inequalities in the early years. The review will aim to focus on evidence that highlights which outcomes can be improved for which groups with a range of interventions in these different areas.

Proquest search:

- Australian Education Index
- Education collection
- IBSS
- Social science database
- Sociology collection

Set 1: Context (ab, ti, su)

pre-natal or prenatal or peri-natal or perinatal or ante-natal or antenatal or childbirth or obstetr* or neonatal or neo-natal or matern* or antepartum or ante-partum or peripartum or peri-partum

or

kindergarten* or prekindergarten or pre-kindergarten or nurser* or infant* or toddler* or baby or babies or preschool* or pre-school* or early near1 (year* or childhood) or ECCE or ECEC

AND

Set 2: Condition (ab, ti, su)

(Child or social or psychological or psychosocial) near/1 development or communicat* or language or diet or nutrition

AND

Set 3: reviews

(su) review* or meta-analys* or systematic or overview or bibliograph* or synthes*

NOT

Set 4: Exclusions

loc.exact("China" OR "Africa" OR "India" OR "South Africa" OR "Asia" OR "Uganda" OR "Mexico" OR "Nigeria" OR "Vietnam" OR "Ghana" OR "Tanzania" OR "Brazil" OR "Kenya" OR "Latin America" OR "Bangladesh" OR "Indonesia" OR "Singapore" OR "South Asia" OR "Sub-Saharan Africa" OR "Thailand" OR "Ethiopia" OR "Pakistan" OR "South Korea" OR "Taiwan" OR "Egypt" OR "Hong Kong" OR "Iran" OR "Myanmar (Burma)" OR "Rwanda" OR "South America" OR "Southeast Asia" OR "West Africa" OR "Argentina" OR "Chile" OR "Middle East" OR "Mozambique" OR "Nepal" OR "Afghanistan" OR "Cuba" OR "East Asia" OR "Gaza Strip")

or

(su) "special needs students" or "school business relations" or "post-traumatic stress disorder" or "post traumatic stress disorder" or "pregnancy complications" or "pain management" or analgesia or hemorrhage or haemorrhage or episiotomy or "cesarean section" or "caesarean section" or "female circumcision" or "female genital mutilation" or "Pervasive Developmental Disorders" or "foetal alcohol" or "fetal alcohol" or dyslexia or "visual impairments" [Exclusions determined by scanning first 60 records of trial search]

Result: 262 items (deduplicated)

Ebsco search

British Education Index

CINAHL

Education Abstracts

ERIC

Set 1: Context (ab, ti, su)

pre-natal or prenatal or peri-natal or perinatal or ante-natal or antenatal or childbirth or obstetr* or neonatal or neo-natal or matern* or antepartum or ante-partum or peripartum or peri-partum or kindergarten* or prekindergarten or pre-kindergarten or nurser* or infant* or toddler* or baby or babies or preschool* or pre-school* or early near1 (year* or childhood) or ECCE or ECEC

AND

Set 2: Condition (ab, ti, su)

(Child or social or psychological or psychosocial) n1 development or communicat* or language or diet or nutrition

ANS

Set 3: reviews

(su) review* or meta-analys* or systematic or overview or bibliograph* or synthes*

NOT

Set 4: Exclusions

(su) "special needs" or "foetal alcohol" or "fetal alcohol" or dyslexia or "visual impairments" or palliative or autis* or disabilit* or disorder* or syndrome* or pathology* or impair* or senior n1 cent* or baby n1 boomer* or "Low and **Middle** Income Countries" or "child abuse" or "criminal justice" or "developing countries" or "low-income countries" or "middle-income countries" or deaf* or "Alternative and Augmentative Communication" or asthma or headache* or speech n1 therap* or "family planning" or "conflict zones" or ADHD

Or

Death* or complication* or blood or visual or therap* or cancer* or carcinogen* or hiv or disease* or "intensive care" or "patient admission"

Or

Abnormal* or mortal* or surgery or "interpreter services" or defect* or "Cerebral Palsy" or leukemia or contraceptive*

Or

"China" OR "Africa" OR "India" OR "South Africa" OR "Asia" OR "Uganda" OR "Mexico" OR "Nigeria" OR "Vietnam" OR "Ghana" OR "Tanzania" OR "Brazil" OR "Kenya" OR "Latin America" OR "Bangladesh" OR "Indonesia" OR "Singapore" OR "South Asia" OR "Sub-Saharan Africa" OR "Thailand" OR "Ethiopia" OR "Pakistan" OR "South Korea" OR "Taiwan" OR "Egypt" OR "Hong Kong" OR "Iran" OR "Myanmar (Burma)" OR "Rwanda" OR "South America" OR "Southeast Asia" OR "West Africa" OR "Argentina" OR "Chile" OR "Middle East" OR "Mozambique" OR "Nepal" OR "Afghanistan" OR "Cuba" OR "East Asia" OR "Gaza Strip" or Peru

Result for BEI, Education Abstracts & ERIC: 172

Result for Cinahl: 193

Medline (Ovid)

Set 1: Context (keyword)

pre-natal or prenatal or peri-natal or perinatal or ante-natal or antenatal or childbirth or obstetr* or neonatal or neo-natal or matern* or antepartum or ante-partum or peripartum or peri-partum or kindergarten* or prekindergarten or pre-kindergarten or nurser* or infant* or toddler* or baby or babies or preschool* or pre-school* or early adj1 (year* or childhood) or ECCE or ECEC

AND

Set 2: Condition (subject word or Mesh heading)

child development/ or language development/ or diet/ or "diet, food, and nutrition"/ or healthy diet/ or child nutrition sciences/ or nutritional requirements/

AND

Set 3: reviews

(su) review* or meta-analys* or systematic or overview or bibliography* or synthes*

NOT

Set 4: Exclusions

China OR Africa OR India OR Asia OR Uganda OR Mexico OR Nigeria OR Vietnam OR Ghana OR Tanzania OR Brazil OR Kenya OR Latin America OR Bangladesh OR Indonesia OR Singapore OR Thailand OR Ethiopia OR Pakistan OR Korea OR Taiwan OR Egypt OR Hong Kong OR Iran OR Myanmar or Burma OR Rwanda OR South America OR Argentina OR Chile OR Middle East OR Mozambique OR Nepal OR Afghanistan OR Cuba OR Gaza or Peru

or

special needs or foetal alcohol or fetal alcohol or dyslexia or palliative or autism* or disability* or disorder* or syndrome* or pathology* or impair* or senior citizen* or baby boomer* or Low Income Country* or child abuse or criminal justice or developing countries or middle income country* or deaf* or asthma or headache* or family planning or conflict zone* or ADHD Or Death* or complication* or blood or visual or therapy* or cancer* or carcinogen* or hiv or disease* or intensive care or patient admission Or Abnormal* or mortal* or surgery or interpreter services or defect* or Cerebral Palsy or leukemia or contraceptive*

or

prenatal exposure or hazardous substances or genetic testing or autism* or genetic or gene

Result: 215

Social Policy & Practice (Ovid)

pre-natal or prenatal or peri-natal or perinatal or ante-natal or antenatal or childbirth or obstetr* or neonatal or neo-natal or matern* or antepartum or ante-partum or peripartum or peri-partum or kindergarten* or prekindergarten or pre-kindergarten or nurser* or infant* or toddler* or baby or babies or preschool* or pre-school* or early (year* or childhood) or ECCE or ECEC

AND

(Child or social or psychological or psychosocial) development or communicat* or language or diet or nutrition

Objective 1 deduplicated (and those duplicated in objective 2 references removed): 782

Items rejected after manual scan based on Set 4 exclusions: 97

Final total: 685

Objective 2 Place-based interventions

Proquest search:

Australian Education Index

Education collection

IBSS

Social science database

Sociology collection

Set 1: context (ab, ti, su)

pre-natal or prenatal or peri-natal or perinatal or ante-natal or antenatal or childbirth or obstetr* or neonatal or neo-natal or matern* or antepartum or ante-partum or peripartum or peri-partum

or

child development or kindergarten* or prekindergarten or pre-kindergarten or nurser* or infant* or toddler* or baby or babies or preschool* or pre-school* or early near1 (year* or childhood) or ECCE or ECEC

AND

Set 2: Service

(ab, ti, su) Place-based or area-based or “collective impact”

or

(su) “systems change”

AND

2012-2020

NOT

Set 3 (ab, ti, su)

Africa or Nigeria or India or Asia or China or Lesotho or Thailand or decolonization or decolonisation or colonialism or migration or “Foetal alcohol” or “Fetal alcohol” or HIV or disability or sleep n/1 disorder* or Whale* or (environmental or ecology* or agricult*) n/1 (education or studies) or “urban transportation” or “water quality” or poetry or agroforestry or gardening or earth n/1 science*

[Exclusions based on researchers' selection from a trial list]

Result: 109 deduplicated

Ebsco search

British Education Index

CINAHL

Education Abstracts

ERIC

MEDLINE

Set 1: context (ab, ti, su)

pre-natal or prenatal or peri-natal or perinatal or ante-natal or antenatal or childbirth or obstetr* or neonatal or neo-natal or matern* or antepartum or ante-partum or peripartum or peri-partum

or

child development or kindergarten* or prekindergarten or pre-kindergarten or nurser* or infant* or toddler* or baby or babies or preschool* or pre-school* or early n1 (year* or childhood) or ECCE or ECEC

AND

Set 2: Service

(ab, ti, su) Place-based or area-based or “collective impact”

or

(su, ti) “systems change”

AND

2012-2020

NOT

Set 4 Exclusions (ab, ti, su)

Africa or Nigeria or India or Asia or China or Lesotho or Thailand or decolonization or decolonisation or colonialism or migration or “Foetal alcohol” or “Fetal alcohol” or HIV or disability or sleep n1 disorder* or Whale* or (environmental or ecology* or agricult*) n1 (education or studies) or “urban transportation” or “water quality” or poetry or agroforestry or gardening or earth n1 science* or epidemiology

or

cisplatin or cerebral cortex or antibiotic prophylaxis or ampicillin or adrenal cortex hormones or childbirth, premature or antineoplastic agents or streptococcal infections or premature birth or intensive care units, neonatal or infant, premature or infant, extremely premature

or

antigens or coral reefs or Bangladesh or Ecuador or disaster planning or Ghana or neoplasms or echocardiography or Malawi or laparoscopy or immunology

[Exclusions determined by scanning subject lists and first 60 records]

Result: 248 items

Social Policy and Practice

Set 1: context (.mp)

pre-natal or prenatal or peri-natal or perinatal or ante-natal or antenatal or childbirth or obstetr* or neonatal or neo-natal or matern* or antepartum or ante-partum or peripartum or peri-partum

or

child development or kindergarten* or prekindergarten or pre-kindergarten or nurser* or infant* or toddler* or baby or babies or preschool* or pre-school* or early adj1 (year* or childhood) or ECCE or ECEC

AND

Set 2: Service

(.mp) Place-based or area-based or collective adj1 impact

or

(su) system* adj1 change*

Or

(ti) systems adj1 change

AND

2012-2020

Result: 2

Total merged and deduplicated: 311

Websites searched

Either publications sections scanned, or search for place-based, area-based, collective impact or systems change

2012-2020

Cochrane: 0

Campbell: 0

What works for children's social care: 0

NSPCC library: 3

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