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# 4 The role of early childhood education and care in shaping life chances

## The changing face of early childhood in the UK



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## ***The changing face of early childhood series***

*The changing face of early childhood* is a series of short reviews, events and engagement that seeks to generate an informed debate on early childhood based on what the collective evidence tells us. The series draws on over 80 studies funded by the Nuffield Foundation and undertaken by multidisciplinary researchers working in universities, research institutes, think tanks and other organisations, as well as other key studies. The research is wide-ranging, reflecting the interests of the research community, as well as the Foundation's priorities.

Our approach is designed to be holistic, bringing together perspectives from different disciplines and vantage points. We want to involve researchers, policy makers, and practitioners to help us explore the issues, develop evidenced-informed recommendations and identify gaps in the evidence. The final review will draw on the insights provided by our readers and contributors over the course of the series.

This review, the fourth in the series, explores the role of early childhood education and care provision in shaping life chances.

- **Review 1** – How are the lives of families with young children changing?
- **Review 2** – Protecting children at risk of abuse and neglect
- **Review 3** – Changing patterns of poverty in early childhood
- **Review 4 – The role of early childhood education and care in shaping life chances**
- **Review 5** – Are young children healthier than they were two decades ago?
- **Review 6** – Parents and the home
- **Review 7** – Conclusion – Bringing up the next generation: priorities and next steps

**Points for discussion** are included throughout the series; these include insights, thorny issues and dilemmas, and research gaps. We value your input on these points, and on the series as it progresses, and the responses we receive will inform the concluding review. You can provide feedback on this review via our website:

[www.nuffieldfoundation.org/contact/feedback-changing-face-of-early-childhood-series](http://www.nuffieldfoundation.org/contact/feedback-changing-face-of-early-childhood-series)

# The role of early childhood education and care in shaping life chances

## Overview and summary

### About this review

*The changing face of early childhood* series explores how young children's lives have been changing over the last two decades. Two key themes run through the series: the implications of the changing nature of family life and family structures for the economic security, development and well-being of young children; and inequalities between children. This review

sets out to explore an area central to both these themes—the importance of ***early childhood education and care***<sup>1</sup> in relation to the lives of young children and in supporting parents in the workplace.

This review looks at the quality, effectiveness and sustainability of early childhood education and care provision and the extent to which it has narrowed gaps between the most and least advantaged young children. It also explores the implications for future policy. We highlight key insights from work the Nuffield Foundation has funded and explore the implications of current changes, including the impact of COVID-19, on young children's lives. We set these new insights in the context of existing research by synthesising and critically appraising a large body of evidence, and highlighting connections and tensions, as well as gaps and uncertainties.

**Note to the reader:** Inline references that are underlined are those funded by the Nuffield Foundation.

1 All terms in ***bold italic*** (at first mention in each section) are defined in the Key terms on page 7.

## Key learning

**Almost all children now experience some combination of informal and formal early childhood education and care well before they start school.**

This takes many forms and is more than preparation for primary school. It focuses on the holistic development of a child's social, emotional, cognitive and physical needs in order to build a solid and broad foundation for lifelong learning and well-being.

**Despite significant investment, there is no national coherent vision for early childhood education and care.**

Over the past twenty-five years, public policy has sought to address different objectives: improving child outcomes, increasing mothers' labour market participation, and addressing disadvantage. The system accordingly is confused and fragmented. It comprises a diverse patchwork of different services and complex funding arrangements. Almost half of places (47%) are provided by the private sector, with 20% provided in state-maintained schools, 18% by the voluntary sector, and 15% by childminders (DfE 2019). Government funding is split between free entitlements that go directly to providers and support for parents to reduce the costs of childcare through the benefit system or tax-free childcare and employer childcare vouchers. The different types of provision and different government incentives to facilitate work, leave some parents confused and uptake is variable.

Government in England now spends around £5.7bn per year on early childhood education and care (including Sure Start children's centres), although real term spending per hour for places has fallen in the last year (Britton et al. 2020)

and government funding is not meeting the true cost of provision of funded places (Ceeda 2019). Given the scale of this investment, it is important to ensure it is enabling the best outcomes for children and families and to assess whether it is sufficient to meet young children's needs, especially for the most disadvantaged. The current picture is one of a dysfunctional market failing those that need it most. This is also seen in the significant strain on the financial sustainability (and in some cases closures) of numerous nurseries, pre-schools and childminders, exacerbated by the COVID-19 pandemic.

**There are inequalities in access, take-up and outcomes.**

For some families the cost of childcare exceeds the support that is available (Coleman et al. 2020). Three- and four-year-olds from the most disadvantaged families are least likely to access their funded places (Campbell et al. 2019). Support targeted specifically at disadvantaged children, such as funded places for two-year-olds, is subject to wide regional variations in take-up, and close to a third of eligible children are missing out (Foster 2021). In some cases, policies designed to increase provision for working parents have inadvertently accentuated disadvantage, such as the 30 hour policy, which effectively gives children of higher-earning parents double the amount of funded early education than many disadvantaged children.

When it comes to children under the age of two, there is a large gap in the provision of funded early childhood education and care, particularly in the light of the closure of many Sure Start Children's Centres. There is also less

understanding of what constitutes quality provision for children under two.

This inequality of access and take-up is important because by the time children start school, there are already gaps in development between children from disadvantaged backgrounds and their more advantaged peers. While this gap has narrowed since 2007, it began to marginally increase in 2018, and by 2019 had returned to 2015 levels, standing at 17.8 percentage points.

**Despite significant growth in the number of early childhood education and care places in recent years, successive governments have struggled to resolve the trade-off between quantity and quality of education and care.**

Much more attention on understanding and improving the *quality* of provision is needed. We know the core elements that make for enriching learning for young children. The underpinning structures, such as child-to-staff ratios, workforce training and size of group, are critical, as are the relationships, care routines and educational experiences offered by staff.

**Key to improving outcomes for young children is the quality of the early childhood education and care workforce.**

Research highlights a strong relationship between the level of staff qualifications and the quality of early childhood education and care, but despite cumulative reforms, qualification levels still vary across the sector. The recognition of the importance of early childhood education and care is not matched by the rewards for those working in the system, where there is little incentive to grow a workforce of increased expertise. Pay in the sector remains low and turnover of staff high.

The childcare workforce is less qualified than both the teaching workforce and the general female workforce. In the

**private, voluntary and independent sector**, the proportion of staff with an NVQ Level 3 qualification fell from 83% in 2014/15 to 52% in 2018/19 (NDNA 2019b). Current investment in qualifications and professional development is piecemeal and there is a lack of long-term strategy to develop the early childhood education and care workforce.

**High quality early childhood education and care provision has been shown to benefit young children's development, though the evidence is complex and evolving.**

There is a long-standing body of research that shows pre-school provision can have positive impacts on early childhood cognitive and non-cognitive skills. This is particularly true for children from disadvantaged backgrounds when quality is high and provision is accessed at a young age and for a sustained period. However, more recent research shows that some of these impacts fade out in primary school. There is also evidence of positive longer-term impacts of early childhood education and care provision for young people and adults in relation to exam performance, the labour market and some other outcomes.

**The impact of COVID-19.**

More recently, policy, practice and the experiences of children and families have all been affected by the COVID-19 pandemic. Changes in parental employment as a result of lockdown, increased home working and job losses, particularly for women, have had a significant impact on children's attendance at early childhood education and care *settings*. Short-term impacts suggest children starting school since the pandemic have fallen behind in relation to their learning and personal and social development, especially in the case of disadvantaged children (Ofsted 2020). The medium-term impacts of this are, as yet, unknown.



## Conclusions

There are many examples of good practice in early childhood education and care provision and component parts that can form the basis for a successful system. However, the current fragmented structures with worrying geographical variations, exacerbated by shifts in policy and practice, have led to gaps in our understanding of what is going on in certain communities, compounded by COVID-19. The evidence points to the importance of local knowledge and experience.

**A whole-system review of early childhood services is needed, one which articulates a clarity of purpose and which meets the needs of both young children and their families and makes a difference to disadvantaged children in particular.**

Given the weight of evidence highlighting the complexities and inefficiencies of current programmes, the time is right for a wholesale evaluation of the purpose and provision of early education and care, learning from what has and has not been effective over the last two decades, to create a national early years strategy. Such a review would draw together the wealth of data and research and multiple stakeholders to create a bold, ambitious vision for early childhood education and care for the twenty first century.

Key questions to consider as part of such a review include those we have identified as points for discussion throughout:

- Given the complexity of a mixed market of early childhood education and care provision—is there a case for more structured standardisation akin to schools, or are there advantages in a plurality of provision?
- Should public policy and investment be prioritising the early childhood education of disadvantaged children over the childcare needs of the wider population, and if so, what are the implications for the funding and structure of early education and care provision?
- What type of funding model would increase quality as well as affordability for parents and sustainability of provision?
- What action can be taken to improve take-up of funded places by children who are most likely to benefit from early childhood education and care provision?
- How might a long-term strategy, including a review of the funding model, improve the low pay and low status of the early childhood education and care workforce?
- Can quality in early childhood education and care be effectively but efficiently measured, and if so, who should be doing it?
- How can early childhood education and care settings further engage and support parents and carers to enhance the learning and development of young children at home?
- How can multiple services for babies, toddlers and pre-schoolers be better integrated and coordinated, starting from the places and services that children already access?

In addition to these questions, a review of early childhood services needs to address other areas, such as the development of curriculum and listening to the voices of children and parents about their needs.

# Scope and methodology

This review explores the role of early education and care provision over the last two decades. The term ‘young children’ includes babies and children under the age of five, from birth to the end of the Reception year in school. Our focus is primarily on England because early education and childcare policies are largely devolved to the administrations of the four nations of the UK and the majority of literature refers to English policy.

To complement the body of work the Nuffield Foundation has funded in this area, we undertook a focused

literature review. Drawing on this review, alongside the extensive knowledge of our advisory group and colleagues, we identify both themes and gaps in the wider literature.

The review is designed to be an informative, rather than all encompassing, synthesis of the literature on early childhood education and care. We focused on studies published in the UK from 2010 onwards and included both peer-reviewed and grey literature. Research funded by the Nuffield Foundation cited in this review is underlined in green.



## Key terms

- **Continuing professional development (CPD)** is the ongoing process of developing, maintaining and documenting professional skills.
- **Demand-side funding** is funding paid direct to parents such as the Childcare element of Universal Credit and Tax-Free Childcare to support payment of childcare fees.
- **Early childhood education and care (ECEC)** refers to any regulated arrangement that provides education and care for children from birth to compulsory primary school age. It includes centre-based and childminding provision and can be privately or publicly funded (or both).
- **Early Years Foundation Stage (EYFS)** is the statutory learning and development framework for children from birth to age five. It sets the standards that all early childhood education and care providers must meet to ensure that children learn and develop well, are kept healthy and safe, and have the necessary knowledge and skills to start school.
- **Early Years Foundation Stage Profile (EYFSP)** is a statutory assessment of children's attainment at the end of the early years foundation stage (known as a summative assessment). It is made up of an assessment of the child's attainment in relation to the 17 early learning goal (ELG) descriptors.
- **Family hubs** are described as local support centres where families with children and young people aged 0–19 can access a broad and integrated range of early help to overcome difficulties and build stronger relationships. This support is often co-located with early years health care and support, such as in children's centres.
- **Longitudinal studies** refer to research that involves repeated observations of the same variables (e.g., people) over short or long periods of time.
- **Maintained sector** refers to publicly funded early childhood education and care provided by local authority-maintained schools.
- **Ofsted** is the Office for Standards in Education, Children's Services and Skills. It inspects services providing education and skills for learners of all ages and inspects and regulates services that care for children and young people. It is a non-ministerial department that reports directly to Parliament.
- **Private, voluntary and independent sector (PVI)** refers to early childhood education and care settings that have identified their business structure as private, voluntary or independent.
- **SEND** refers to special educational needs and disabilities and includes all children identified as having additional needs.
- **Setting** is an holistic term that covers all formal environments for children from birth to compulsory school age, including childminders, day nurseries, pre-schools, maintained nursery schools, and children's centres.
- **Supply-side funding** is government funding paid directly to early childhood education and care settings, such as the entitlement to 'free' hours of early education and childcare.

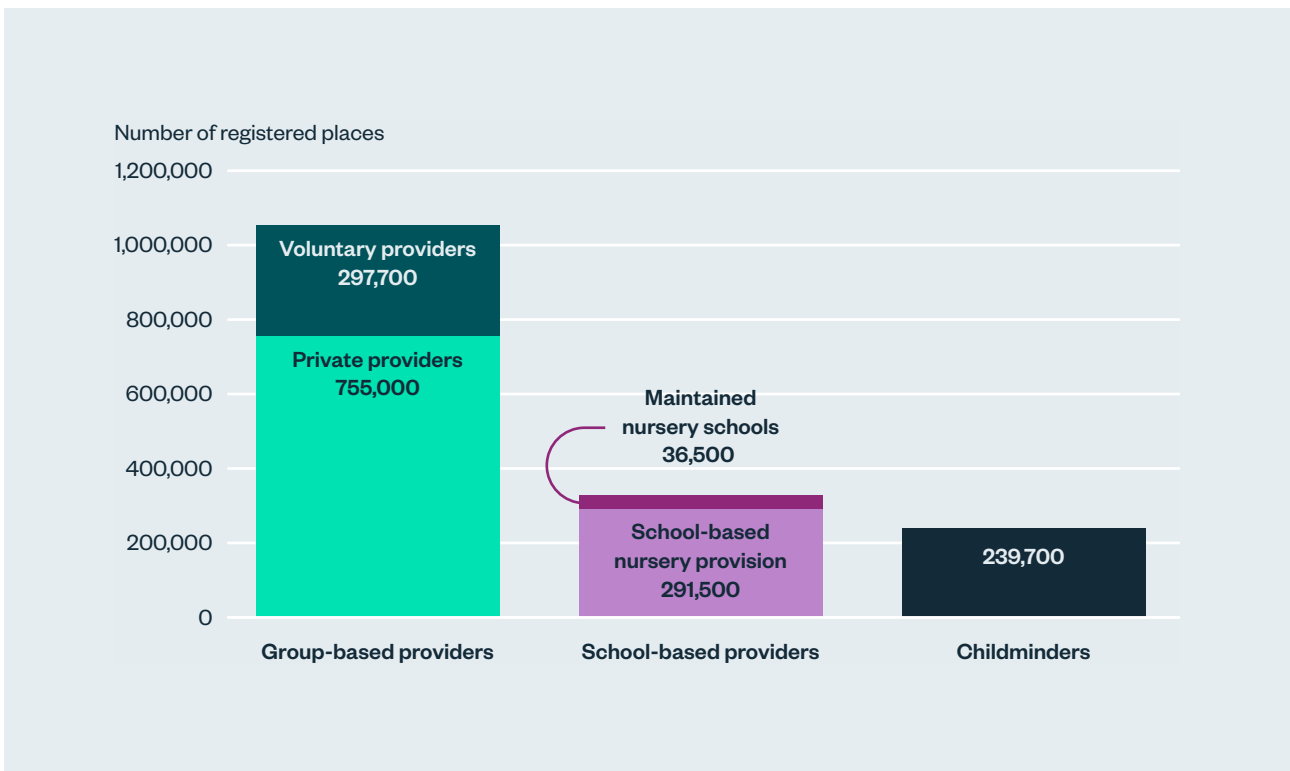
# 1 Organisation and funding

In the UK, parents can choose whether to use a nursery or childminder for their child prior to compulsory school age. In practice, the vast majority of children from birth to age five, and almost all three- and four-year-olds, attend some form of **early childhood education and care** provision. While all **Ofsted** registered provision follows the same curriculum, there is a great deal of diversity in how early childhood education and care is provided and funded, which in turn has implications for the accessibility, affordability, quality and sustainability of provision.

## 1.1 Who provides early childhood education and care?

Since the first National Childcare Strategy (Department for Education and Employment 1998), there has been a focus on developing new early childhood education and care places. **But this expansion in provision has been piecemeal, built up over years as a result of programmes led by successive governments and different government departments to tackle varying priorities.** As a result, children's experiences vary significantly **and families navigate**

**Figure 1:** Proportion and number of places by types of provider in 2019 (England). *Source: Department for Education (DfE) 2019.*



**a highly complex terrain of provision, dependent on where they live, the services they and their children need and what they can afford.**

In comparison to the school system, provision of early childhood education and care services in England is described as a *split system* (Moss 2020). While childcare and early education are often experienced by children and families as indistinguishable, they have been developed and funded separately. **There is a tension between the different objectives of ‘education’ and ‘care’, as provision has increasingly moved in the direction of expanding childcare for the benefit of working parents.**

Publicly funded entitlements are offered by a diverse range of *settings*: state maintained, private and voluntary organisations including local authorities, schools, charities, social enterprises and limited companies and self-employed childminders. These settings are broadly divided into the *maintained* sector (nursery schools and nursery classes), and the *private, voluntary and independent* sector (including day nurseries, pre-schools and childminders). Figure 1 shows that the vast majority of places are provided by the private sector with smaller numbers of places provided by the voluntary, maintained sector and childminders.

**This provision constitutes a mixed market of early education and care—the manner in which children access the system and the ways in which these services are run differ significantly from the relative uniformity of the school system.** From limited and patchy provision in the mid-1990s, the last twenty-five years has seen an exponential growth in the number of places for children under five. National and international research (Lloyd and Penn 2013) illustrates how childcare market operations can generate

socially stratified early childhood education and care provision with some for-profit providers increasingly focussing on more affluent areas to generate income from fee-paying parents. **This suggests that high quality, accessible and affordable services may, in some areas, be out of reach for low-income families** (Coleman and Cottell 2019).

However, this is a complex picture. While the growth in large chains of commercial childcare businesses is marked, it remains relatively small as individual sites and small groups of nurseries with one to four sites make up 83% of provision (Ceeda 2019). A deeper analysis of the financial operations of individual or smaller-scale providers (building on Blanden et al. 2020) may help understanding of the complexity of the sector, the use of public funds and its sustainability. Similarly, a comprehensive understanding of ‘third sector provision’ (such as employee owned and co-operative models of provision) would contribute to a more complete picture of current funding and operational models and their potential for scalability.

The impact of the COVID-19 pandemic on the composition of the early childhood education and care sector is emerging (Lewis et al. forthcoming). While there are some data about the relationship between types of provision and the quality of education and care provided, **a deeper understanding of any correlations between the different models of provision and children’s outcomes could inform future policy.**

## 1.2 Sure Start and children’s centres

One of the most marked changes in the past two decades has been the rapid growth followed by the steady decline in Sure Start centres, as a result of shifts in successive

governments' policies. The original Sure Start initiative evolved from local programmes in 1998 to form Sure Start children's centres (Eisenstadt 2011; Lewis 2011). Responsibility for them was transferred from multiple agencies to local government with a target to develop 3,500 children's centres by 2010. A 'core offer' of integrated services, including early childhood education and care, in the same location, enabled easy access to community health services, parenting and new family support and outreach services, and links to training and employment opportunities for families with young children. [Campbell et al. \(2018\)](#) found take-up of early education and care amongst disadvantaged children was higher in areas with Sure Start provision (see Section 4 for evidence on the impact of Sure Start).

Since 2010 the number of centres has been in decline, reflecting a substantial

reduction in public spending. Research undertaken for the Sutton Trust (Smith et al. 2018) estimated 1,000 children's centres had deregistered in the period 2009–2017, although DfE figures reflect a lower closure rate (Figure 2).

**This reduction in the number of registered centres has inevitably resulted in scaling back of support services for children from birth to three years old, which in some areas is now greatly reduced.**

Against the backdrop of an increasingly fragmented national network of centres, [Lewing et al. \(2020\)](#) draw out the different models for children's centres and *family hubs* currently in operation. The study emphasises the importance of local areas establishing clarity about the purpose of the services and the desired outcomes, and the need for

**Figure 2:** Total number of Sure Start children's centres 2003–2019.

Source: [DfE \(2019b\)](#), [Stewart and Reader \(2021\)](#).



better evidence in understanding which models are effective.

### 1.3 Funding

The complex array of early childhood education and care provision is funded by the government in a number of ways. This is comprised of **supply-side funding** through the free entitlements,<sup>2</sup> which is paid direct to early childhood education and care providers and **demand-side funding** to reduce the costs of childcare for parents through the benefit system or through tax-free childcare and employer childcare vouchers (Britton et al. 2020). Support through benefits is targeted at low-income families and support through tax and employer subsidies is targeted at middle- and higher-income families. Figure 3 shows the different government-funded provision and entitlements for children of different ages.

Stewart and Reader (2021) have mapped changes in government spending on early childhood education and care, including Sure Start over the last eight years. Comparing 2011/12 with 2018/19, Figure 4 shows:

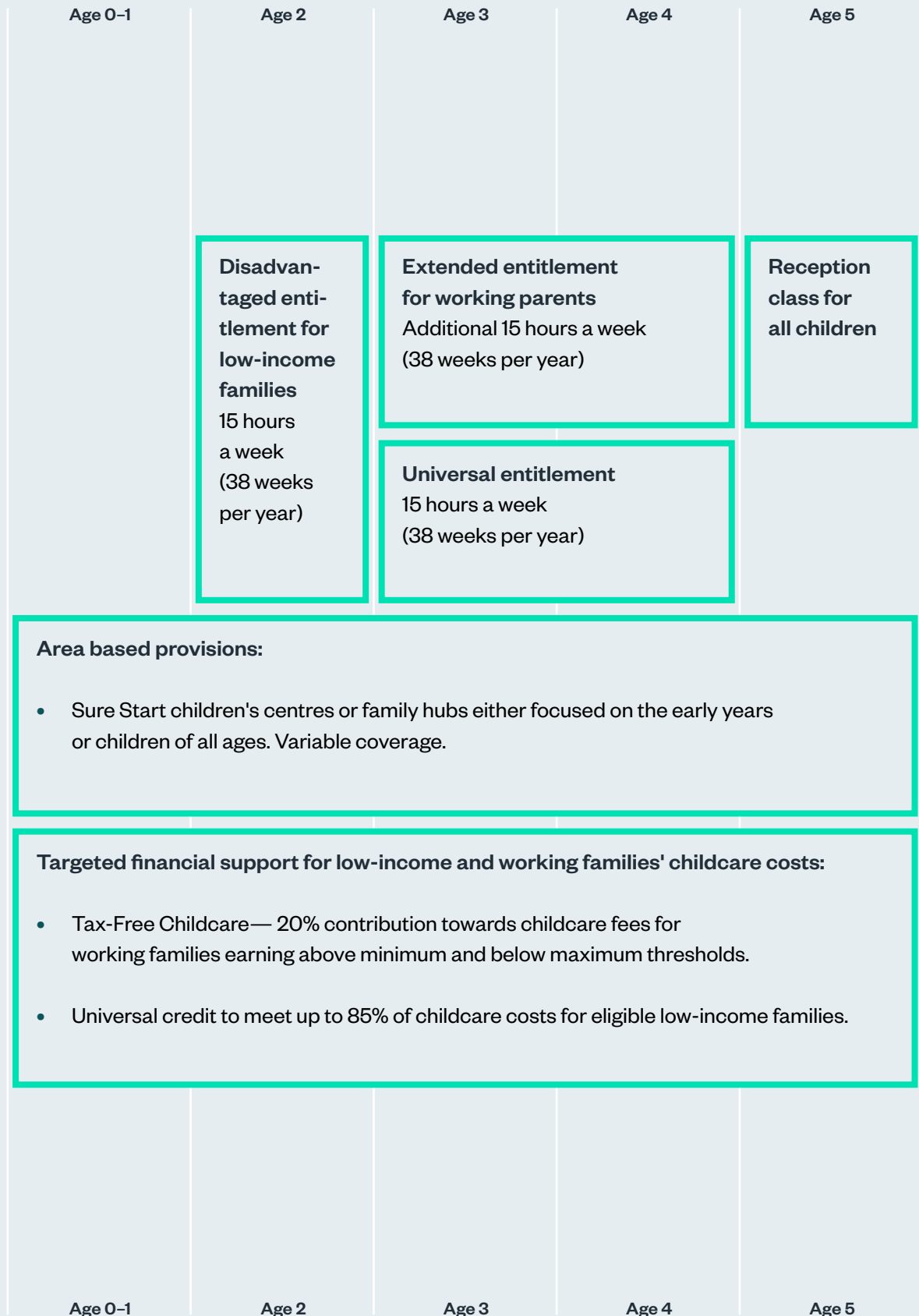
- A small reduction in total spending.
- An increase in early entitlement spending; from 2017 this is primarily a result of the introduction of the 30 hours free childcare for working parents.<sup>3</sup>
- A marked fall in spending on Sure Start children's centres.
- Changing patterns of demand-side funding, with a fall in spending through benefits and a rise in spending through tax-free childcare and employer childcare vouchers.

This changing pattern of demand-side funding has led to a shift away from low-income families to middle- and higher-earners. In the most recent year, support for middle- and higher-earners overtook support for low-income families for the first time (Stewart and Reader 2021).

An example of this change is the Tax-Free Childcare<sup>4</sup> scheme, launched in 2017, to support payment of childcare fees for working parents. **However, this fund is reportedly underutilised.** In the past three years the government spent £385 million on tax-free childcare, compared to its initial forecast of £2.1 billion.<sup>5</sup>

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- 2 The Department for Education funds three entitlements:
- **Universal Entitlement.** Introduced in 2010, it provides 15 hours a week (38 weeks a year) of early education to all three- and four-year olds.
  - **Disadvantaged Entitlement.** Introduced in 2013, it provides 15 hours a week (38 weeks a year) of free early education for two-year-olds who meet certain criteria, including where families qualify for specified benefits, the child has an Education, Health and Care Plan or is 'Looked After'.
  - **Extended Entitlement.** Introduced in 2017, it provides an additional 15 hours a week (38 weeks a year) for three- and four-year olds of working parents. Taken with the universal entitlement, this totals 30 hours a week for 38 weeks of the year.
- 3 The IFS annual report on education spending in England (Britton et al. 2019 and 2020) shows a different pattern of increases in the early years free entitlement increasing between 2010/11 and 2014/15.
- 4 Under the Tax-Free Childcare scheme, the government will pay 20% of childcare costs up to £2,000 a year. To be eligible, parents must earn at least National Minimum Wage for 16 hours a week on average and no more than £100,000 a year.
- 5 Steve Barclay MP response to written parliamentary question [online]. Available from: <https://questions-statements.parliament.uk/written-questions/detail/2020-09-10/88366> [Accessed 27 August 2021].

**Figure 3:** Government funded early childhood education and care provision and support in 2021.





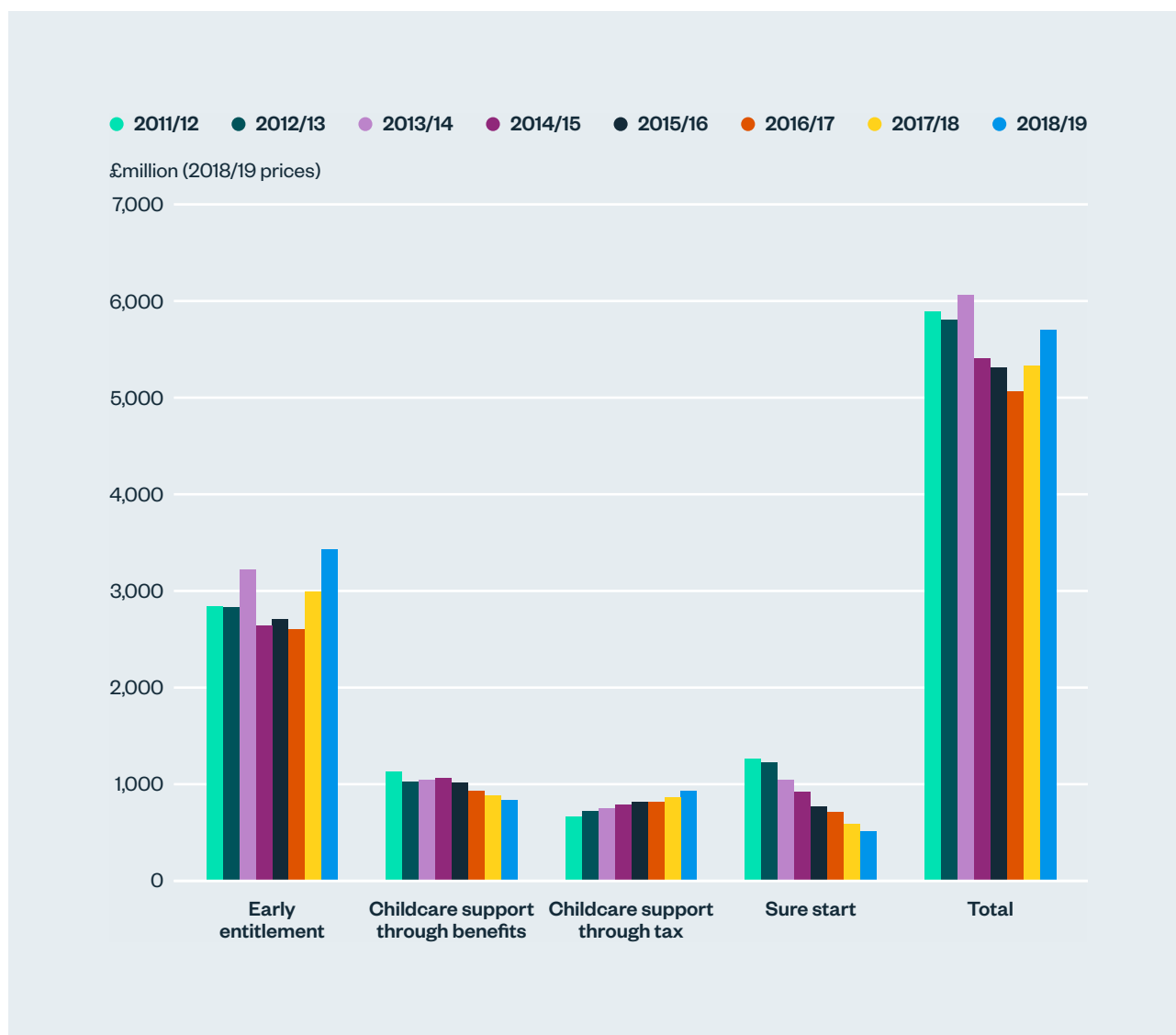
This prompts questions about both the efficacy of the scheme and whether its intended aims of reducing childcare costs and increasing access are being realised.

This complex funding regime reflects the differing objectives of the early childhood education and care system. Free entitlement places, available regardless of income, were initiated to improve educational outcomes. Conversely, support through the tax/benefit system, tax reliefs and the extended entitlement of 30 free hours, have been developed

to reduce the costs of childcare as an incentive to parental employment. By contrast, Scotland has extended its 30 hour free childcare offer to all three- and four-year-olds and eligible two-year-olds.

As Farquharson (Britton et al. 2019) argues—with over eight different forms of early education/childcare support schemes in operation—it is critical for government to clarify its goals for provision. **The complexity of this funding regime also proves challenging for some families to navigate** and may impact on the take-up of provision (see Section 2).

**Figure 4:** Spending on services for the under-fives (£million, 2018/19 prices).  
Source: (Stewart and Reader 2021).



## 1.4 How sustainable is provision?

Analysis by the Institute for Fiscal Studies (IFS) (Britton et al. 2020) shows that real term spending per hour for early childhood education and care places has been falling since 2017/18, particularly for two-year olds (a 9% fall between 2018/19 and 2019/20). At the same time, staffing costs have gone up, with an increase of over 16% in the National Minimum Wage/National Living Wage between 2017–20. It has been estimated that the funding shortfall (the difference between the cost of provision and the amount received in government funding) per hour of childcare delivered through the free entitlement is between 20–37% (Ceeda 2019). Data received by the Early Years Alliance (EYA) in response to a Freedom of Information request to the DfE confirmed that the funding rate given to local authorities in England is two-thirds of what the government predicted would be needed to fully fund the scheme (EYA 2021).

This shortfall in funding is having a detrimental effect on the sustainability of provision—it is estimated that 35% of nursery closures in 2018 were in areas that are among the 30% most deprived wards in England. By comparison, 14% of nursery closures were in communities in the 20% most affluent areas in England (NDNA 2019). It is also impacting on affordability. Providers are heavily reliant on income from parent fees to recoup this shortfall, and these fees are typically charged at a higher rate as a form of cross-subsidy (i.e. covering the shortfall in funding on ‘free’ hours). **This can mean fees are sometimes beyond the reach of low-income families. This tension between affordability for parents and the sustainability of provision is the subject of ongoing**

**debate. However, as a result, questions of equity of access and thereby outcomes for all children remain.**

Despite a range of measures to support the early childhood education and care sector, the pandemic has negatively affected the viability of settings. In the wake of several national lockdowns since March 2020, a significant proportion of schools and early childhood education and care settings reported much lower occupancy than in previous years. Exacerbated by some parents’ anxieties about risks of COVID-19 transmission and by changes to parents’ employment status and working patterns, settings have seen fewer children return. Since Spring 2021 funding has been based on current attendance (Foster 2021). As most providers rely on a mix of publicly and privately funded hours, this has resulted in reduced fee incomes and further financial strains on these small enterprises (Whittaker et al. 2021). Vulnerable before the pandemic, they are now in danger as a result of long-term closure and, potentially, reduced demand over the medium term. As a result, children’s access to provision and learning opportunities are less secure. (EYA 2020; Blanden et al. 2020).

### Points for discussion

- Given the complexity of a mixed market of early childhood education and care provision—is there a case for more structured standardisation akin to schools, or are there advantages in a plurality of provision?
- Is the current mix of funding arrangements for early childhood education and care fit for purpose? What changes could increase quality as well as affordability for parents and sustainability of provision?

## 2 Inequalities in access, take-up and outcomes

High quality **early childhood education and care** improves children's outcomes, especially for the most disadvantaged, so questions of access and take-up are critical (Campbell et al. 2018). In England, a child's access to early childhood education and care provision is determined by a number of factors, including availability (close proximity to home or parents' work), capacity and affordability of local provision and eligibility for state funded hours or 'free childcare'. Take-up of places varies by socioeconomic and ethnic group as well as locality. Parental choice also plays a role and is shaped by parents' working arrangements and their attitudes to early education and childcare.

### 2.1 What early childhood education and care provision is on offer and who for?

As discussed in Section 1, eligibility for funded early education and care varies according to the age of the child, and, in the case of some free childcare, by parental income and employment status. **This prompts questions about equity**

**of access for low-income families who are not in work or are working less than 16 hours a week.** In addition, access to places is shaped by local capacity and availability of provision.

There is a major gap in provision when it comes to very young children.

**There are no fully publicly funded programmes of care and education for children under the age of two.**

Following maternity and paternity leave, if parents choose formal early childhood education and care provision (rather than informal childcare with relatives or friends) they may purchase provision from any **Ofsted** registered provider.<sup>6</sup> Overall, provision for very young children has lacked policy attention. While there is a body of research on very early pedagogy and child development, **there is very little research on the infrastructure of this provision and on outcomes for children. The recent Early Years Healthy Development Review (HM Government 2021), while focused on health outcomes for children under two, offers an important impetus to improve links between health services and childcare and early education.**

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6 Formal provision also includes nannies and au pairs (also known as home childcarers), who are directly employed by parents.

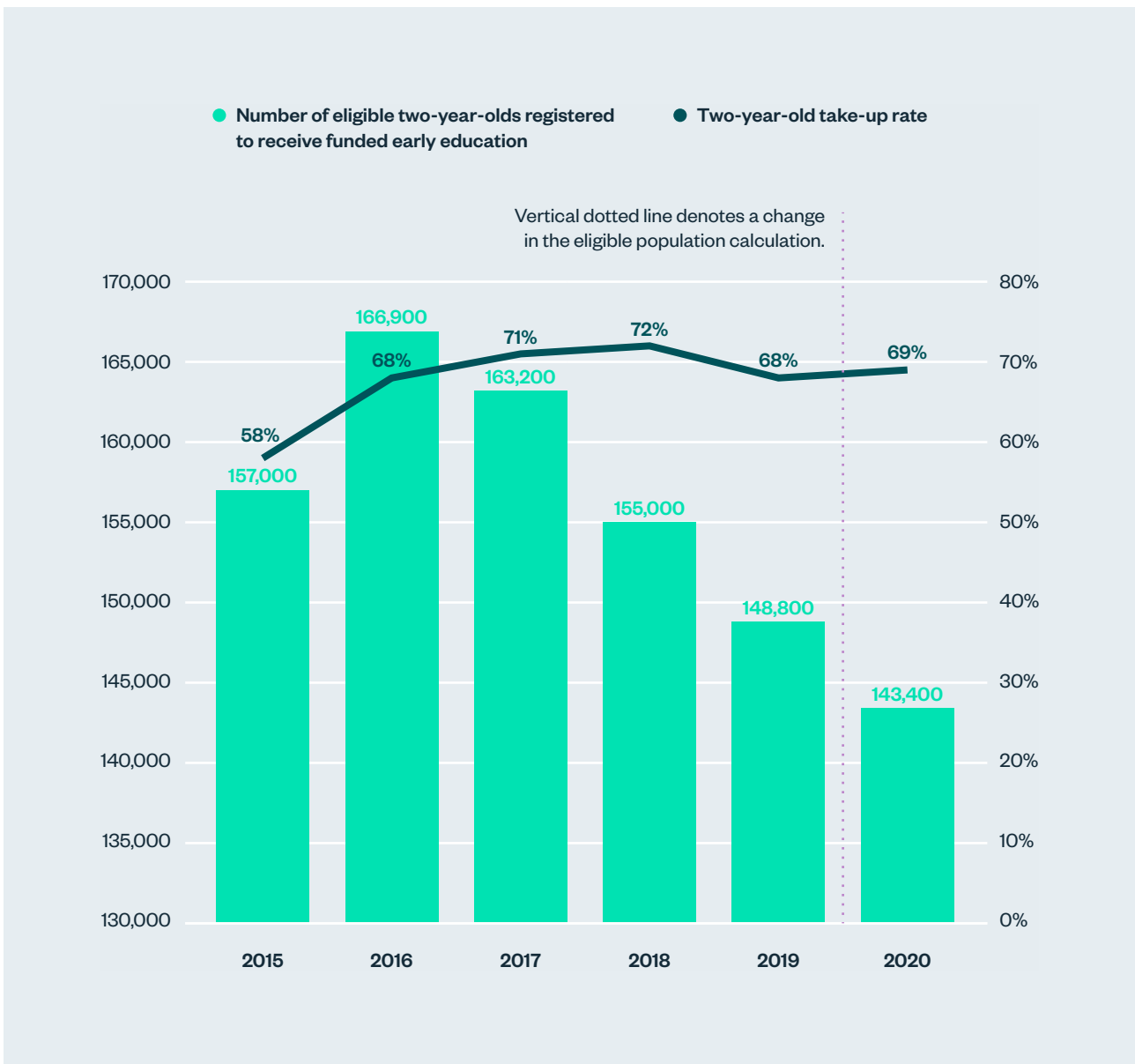
## 2.2 Take-up of places

### Two-year olds

Two-year olds from disadvantaged households in England are entitled to 15 hours of free early childhood education and care a week—known as the ‘disadvantaged entitlement’. **Take-up of the two-year-old funded entitlement, while relatively high, is lower than policy targets and highly variable across the country—ranging from 39% to 97%**

(Foster 2021). In January 2020, 69% of eligible two-year-olds benefited from some funded early education, below the DfE aspiration for a 73–77% take-up rate (National Audit Office (NAO) 2020). Figure 5 shows that while take-up has increased; close to a third of eligible children are missing out. This is concerning, as research suggests that disadvantaged children can benefit from good quality provision between the ages of two and three (see Section 4).

**Figure 5:** Take-up of early childhood education and care places for eligible two-year-olds, 2015–2020. *Source: DfE (2020)*



### Three- and four-year-olds (universal entitlement)

Take-up of the universal entitlement of 15 hours for three- and four-year-olds has remained high, standing at 93% in 2019. However, take-up has been falling gradually over the last 15 years and it is important for policy makers to understand what might be driving this, given that provision is intended to help narrow gaps between children when they begin school (Britton et al. 2020). It is also important to note that some children will be accessing less than their full entitlement to 15 hours early education a week whether due to parental choice or availability of sessions.

Barriers to take-up include parental concerns about costs, such as having to pay for top-ups and extras, travel costs and access to a setting at a convenient location (DfE 2018). Families in deprived areas are less likely than other families to take up the entitlement, partly because of the costs attached to paying for non-funded hours (NAO 2020). This echoes research by Campbell et al. (2019) who found that **children from the most disadvantaged families were least likely to access their funded entitlements and take-up was lower among some ethnic minority groups and in some regions.** The study also showed lower attendance among the children who went on to become eligible for free school meals in primary school.

This lower take-up among disadvantaged families may be the result of **the complexity of multiple entitlements with varying eligibility criteria and the ways in which these are implemented locally.** In a study of low- and middle-income families, parents described an information ‘overload’, making it difficult to understand the eligibility criteria for each entitlement (for children of different ages), and how it related to their unique personal circumstances (Chadwick et al. 2018).

There is much less research and data about access to, and take-up of, early childhood education and care provision for some groups of children who face particular disadvantages, but who are likely to have the most to gain from good quality care and education.

Attending a pre-school setting has a positive impact on the cognitive development (in both language and non-verbal skills) of young children ‘at risk’ of Special Educational Needs (Sammons et al. 2003). However, children with **Special Educational Needs or Disabilities (SEND)** often have difficulty accessing their full 15-hour entitlement, or any early education at all. Analysis by DfE (2018) suggests that on a national level, higher levels of children with SEND within local authorities predict lower take-up rates of early education. Despite this low take-up rate, there is **limited recent research identifying barriers to take-up from a parent’s perspective.**

**There is also very little research about access to early childhood education and care entitlements for children in local authority care.** Using local authority data, Mathers et al. (2016) found that children in care were less likely than their peers to access their universal entitlement. However, there is no published national data on the take-up of early childhood education and care provision by children in care, on the quality of **settings** attended or on educational attainment prior to statutory school age.

Research by Campbell et al. (2018) found that children who speak English as an additional language were nearly three times as likely not to take up their full early education entitlement compared to children with English as their first language. The study also found that take-up was lower among children from Black African, Pakistani, Bangladeshi and Gypsy/Roma/ Traveller backgrounds, compared to their White British peers.

### Three- and four-year-olds (extended entitlement)

The introduction of an increase to 30 hours of free childcare for the children of working parents in 2017 was intended as a major advancement in provision. There is some evidence that the 30 hour policy has had an impact on maternal employment, with an increase in the proportion of mothers of three- and four-year-olds in paid work, particularly part-time (Stewart and Reader 2021). However, the policy also appears to be having unintended consequences for access to childcare places for the most disadvantaged. Recent research found that 70% of parents eligible for the funded places for their children are in the top half of the earnings distribution (Pascal et al. 2021). In 2019, a House of Commons Education Committee report on tackling disadvantage in the early years concluded that limiting the 30 hour offer to children whose parents met the earnings threshold was likely to entrench inequality rather than to close the attainment

gap. The committee recommended the government ‘review its 30 hours childcare policy to address the perverse consequences for disadvantaged children’ (House of Commons 2019, p. 17).

In terms of outcomes for children, the 30 hour childcare policy **heralded a shift in emphasis from the original ‘early education’ entitlement to a focus on ‘childcare’ which enables parents to work** (Stewart and Reader 2021). Policies designed to promote early childhood education and care could, in principle meet both objectives, but in practice there are likely to be trade-offs—notably, between policies that focus on provision for all children and those that seek to narrow gaps in attainment; and between promoting child development and providing affordable childcare for working parents.

In policy terms, recent years have also seen an increased focus on the expansion of early childhood education and care places and less emphasis on the quality of provision.

**Figure 6:** Gap in ‘good level of development’ scores between children eligible for free school meals and those who are not. *Source: Archer and Merrick 2020.*

Year	Gap in ‘good level of development’ score between children eligible for free school meals and those who are not	Change year on year
2013	19.0%	
2014	18.9%	▼
2015	17.7%	▼
2016	17.3%	▼
2017	17%	▼
2018	17.3%	▲
2019	17.8%	▲



Questions remain about whether the right balance is being struck between supporting child development and learning through high quality early education, and increasing parental employment through access to flexible and affordable childcare (Archer and Merrick 2020).

## 2.3 Inequalities in outcomes

The *Early Years Foundation Stage profile (EYFSP)* measures children's development at the age of five. The latest results suggest that progress in closing the gap between disadvantaged children (defined as those children eligible for free school meals) and their more advantaged peers has stalled. This is measured by those children who gained a 'good level of development'.<sup>7</sup> While this gap has narrowed since 2007 (Stewart and Reader 2021), it began to marginally increase in 2018, and by 2019 had returned to 2015 levels, so **over this five-year period no progress was sustained in closing the gap.**

This stall in progress may be the result of changes in the provision of, and access to, early education and care, but it may also be driven by wider socioeconomic factors such as the increase in poverty among families with young children, which we explore in our earlier review, *Changing patterns of poverty in early childhood*.

The International early learning and child well-being study<sup>8</sup> (Kettlewell et al. 2020) provides insight into the differences

in early childhood development in England. It shows inequalities in children's development at age five between those who were eligible for free school meals and those who were not. In 2018, gaps in development ranged from eight months in physical development to five months in literacy, numeracy and emotional skills.

The COVID-19 pandemic has had a marked effect on how young children are faring. Following the closures of some schools and early childhood education and care settings during spring 2020, parents reported a particularly negative impact on their child's social and emotional development and well-being, including over half (53%) of those who had been unable to return to their original setting. Some providers have indicated impacts on physical development for those children from deprived homes in particular (Pascal et al. 2020). As a result of the pandemic, many children will not have attended their early childhood education and care settings or school for considerable periods of time. Data from the DfE (2021) reveal that as of January 2021, 62% (124,500) of eligible two-year-olds were registered for the 15 hours, down from 69% in 2020. Take-up of places for three- and four-year-olds is still not back to pre-pandemic levels, with numbers down by 5% for both the universal and extended hours.

Research undertaken by the IFS suggests that inequalities may have worsened over the course of the spring 2020 lockdown, especially for primary school students, with a considerable gap

7 Children are defined as having reached a 'Good Level of Development' at the end of the Early Years Foundation Stage if they have achieved at least the 'expected' level within a number of Early Learning Goals at the end of the Reception Year of school.

8 The International early learning and child well-being study is a study of five-year-olds by the Organisation for Economic Cooperation and Development (OECD) which aims to gather evidence about how to enrich a child's first experiences of learning. It took place in England for the first time in 2018 and involved children, teachers and parents in England, Estonia and the United States.

in learning time between primary school age children from poorer and better off families ([Andrew et al. 2020](#)). In November 2020, Ofsted reported that children who were hardest hit by the pandemic were 'regressing in basic skills and learning', particularly for children with additional needs and those whose parents were unable to work flexibly (Ofsted 2020). The DfE has initiated a 'catch up' programme for children aged four and over, including rollout of the [Nuffield Early Language Intervention](#) for children in reception classes to improve their language and early literacy skills. There is also limited 'catch up' funding for children from age two in some areas, but no comprehensive overall programme of support for children from birth.

## Points for discussion

- What action can be taken to improve take-up of funded places by children who are most likely to benefit from early childhood education and care provision?
- Should public policy and investment be prioritising the early childhood development of disadvantaged children over the childcare needs of the wider population, and if so, what are the implications for the funding and structure of early education and care provision?

# 3 Quality and the workforce

An increasing amount of evidence shows that **early childhood education and care** needs to be of high quality to have a positive impact on children's outcomes, particularly for the most disadvantaged.

The early childhood education and care workforce is a core component of high-quality provision (Bonetti 2020; Nutbrown 2012); however, the consistency of qualifications across the workforce varies significantly. The sector remains undervalued and staff do not enjoy the same status as school teachers or lecturers. While there have been some positive policy developments in England in the past few years, low pay, limited opportunities for progression and high workload are troubling features of the current picture. Turnover of staff appears to be increasing. This section considers the key elements of what constitutes quality provision, the make-up of the early childhood education and care workforce, the importance of qualifications and the debate over the impact of degree-qualified educators.

## 3.1 How is quality in early education and care defined and measured?

The quality of early education and care is framed both in terms of the **structure** of provision and the **quality** of children's experiences and interactions with teachers (Hillman and Williams 2015).

Bonetti and Brown (2018) focused on the 'iron triangle' of structural quality:

child-to-staff ratios, workforce training and professional development, and size of group (see Figure 7). Each has an impact on children's cognitive and social-emotional outcomes, although few studies have isolated the impact of each element of the triangle. Paying insufficient attention to any one of the three elements could result in disappointing outcomes.

The other key component of quality relates to children's day-to-day experiences. Good and effective early childhood education and care **settings** include warm interactive relationships with children, caring for their regular needs (e.g., toileting, food, rests), as well as strong staff knowledge of the curriculum and how

**Figure 7:** The iron triangle.

Source: Bonetti and Brown (2018).



children learn, and encouraging high levels of parent engagement in children's learning.

When it comes to children under three, there has been considerably less attention on the specific features of what constitutes quality provision. [Mathers et al. \(2014\)](#) identify potential for future research in this area including:

- Specific pedagogical practices that facilitate the learning and development of babies and toddlers.
- Specific features of qualifications, in-service training, supervision, and support for how early childhood education and care settings can most effectively engage and support parents including support in developing a rich home learning environment.
- The effects and potential benefits of service integration (such as early childhood education and care and health) outside the context of specific interventions (see page 31 on the impact of Sure Start).

Measuring quality in early childhood education and care provision is contentious. There is routine administrative data available through *Ofsted* ratings and the extent of staff qualifications in early childhood

education and care settings (DfE 2019). However, *Ofsted* inspections have tended to focus on the structural elements of quality, such as staff qualifications, ratios, size of premises and equipment, with less emphasis on factors such as interaction with children, appropriateness of resources and leadership and management ([Hillman and Williams 2015](#)). Inspections are brief in duration and there are criticisms that ratings are broad brush, making it difficult to fully capture the complexity of elements that constitute quality.

Other more comprehensive measures exist (see Box 1), but these are used in the context of research studies, and do not form part of official *Ofsted* ratings. **So, the challenge remains—can quality in early childhood education and care provision be effectively but efficiently measured, and who should be doing it?**

Beyond these indicators the literature does not typically consider parents' views on what constitutes quality early education and care. Research with parents on this issue is key, as they are well placed to judge their children's needs and to consider how early childhood education and care can support the whole family (e.g., by supporting children's outcomes *and* opportunities to increase parents' earning potential).

### Box 1: Assessing quality

- The Early Childhood Environment Rating Scale covers provision for children from two and a half to five and includes a scale which gauges quality of provision and is widely used by research studies ([Hillman and Williams, 2015](#)).
- The Study of Early Education and Development (SEED) (DfE 2014–20), includes measures of workforce qualifications, ratios and group size as well as assessing the activities which take place within the setting. This involves the collection of large-scale primary data.

### 3.2 What is the make-up of the early childhood education and care workforce?

The early childhood education and care workforce is diverse in its qualifications and professional roles, including teachers, nursery nurses, assistants and childminders.<sup>9</sup> The workforce is female dominated—only 1.8% of nursery nurses and assistants, and 4% of childminders are male (Bonetti 2018). There is little information about the number of ethnic minority staff employed at different levels. In terms of age profile, a picture of a younger, less highly qualified, less experienced workforce is emerging. One third of staff in nurseries are aged 18–20 (NDNA 2019b).

#### Stability

Evidence considered in Section 4 suggests that children’s daily experiences, interactions with early education staff, such as cognitive stimulation, and consistent care and support have an impact on children’s outcomes (Sim et al. 2018). The lack of stability in the early childhood education and care workforce makes this difficult to achieve. Recent research by the Social Mobility Commission (2020) illustrates a high degree of turnover. The most salient barriers to a stable early childhood education and care workforce are identified as:

- low income;
- high workload and responsibilities;

- insufficient training and opportunities for progression;
- low status and reputation; and
- negative organisational culture and climate.

Findings from several studies suggest that pay is a significant factor in practitioners’ propensity to leave their employer and/or the sector altogether. The average wage in the early childhood education and care workforce is £7.42 an hour,<sup>10</sup> compared to £11.37 an hour across the female workforce (Social Mobility Commission 2020). This is underscored by Bonetti (2019), who found that **44.5% of childcare workers were claiming state benefits or tax credits.**

Recruitment continues to be a significant challenge for early childhood education and care providers. According to Ceeda (2019), in 2018 32% of settings had vacant posts compared to the wider labour market where 20% of employers had vacancies (Winterbotham et al. 2018).

Turnover of the early years workforce appears to be increasing, rising from 13% in England in 2013 (DfE 2014) to 24% in 2018 (NDNA 2019b), with many staff leaving for better paid retail jobs, further exacerbating the recruitment challenge. This situation appears to have intensified since the start of the pandemic. Factors including staff recruitment and retention, funding for qualifications and professional development, and appropriate remuneration of employees combine to **make the development of a stable workforce delivering high**

9 Labour Force Survey categories conflate Early Years teachers with all other teachers, so this data only looks at the non-teacher workforce.

10 This is below 'standard' National Minimum Wage because of a high proportion of apprentices in the sector, who are paid at a lower rate.

quality early education a significant and immediate challenge.

### 3.3 How well qualified is the early childhood education and care workforce?

There is a strong relationship between the level of staff qualifications and the quality of early childhood education and care (Karemaker et al. 2011; Mathers et al. 2007; Mathers and Smees 2014). But despite cumulative reforms, qualification levels still vary across the sector (Hillman and Williams 2015) and important distinctions between staff in different sectors remain, for example between teachers and other members of the early childhood education and care workforce, as shown in Box 2 (Bonetti 2019).

The childcare workforce is less qualified than both the teaching workforce and the general female workforce, and there are important differences between the maintained and private, voluntary and independent sectors. In the latter, 62.4% of staff are qualified at Level 3 and only 5.8% are qualified at Level 4 (e.g. Higher National Certificate HNC) or above (Bonetti 2019).

Moreover, data from an NDNA (2019b) survey suggests a concerning decline in the proportion of staff with an NVQ Level 3, which reduced from 83% in 2015/16 to 52% in 2018/19.

Staff in schools are more likely to be highly qualified than those working for private and voluntary providers or as childminders, as schools are required to use teachers with Qualified Teacher Status. In fact, 39% of staff in reception and 29% of staff in school nurseries are qualified to at least level 6 (degree level), compared to 10% of staff in the private, voluntary and independent sector, and 8% of childminders (DfE 2017). **This disparity in the level of qualifications between the maintained and private and voluntary sector has implications for the quality of provision and outcomes for children** (see Section 4).

There have been a number of initiatives to boost quality over the last two decades. In 2006, the Labour government introduced a new graduate qualification, Early Years Professional Status, and provided funding to develop a graduate level workforce via the Transformation Fund, later superseded by the Graduate Leader Fund (Stewart 2013). The Coalition government commissioned the Nutbrown Review (2012) which

#### Box 2: Qualification requirements:

- All ***maintained*** nursery schools and classes must be led by qualified teachers who are required to undertake an undergraduate degree, and potentially an additional teacher training programme to achieve Qualified Teacher Status (Level 6).
- In ***private, voluntary and independent*** group settings, the manager must hold at least a full and relevant level 3 qualification (equivalent to A level) and at least half of all other staff must hold at least a full and relevant level 2 qualification (DfE 2017c).



sought to address disparities and weaknesses with the early years training framework in England with a number of recommendations, many of which were rejected. In response to the Nutbrown Review, the government introduced the new Level 3 Early Years Educator (EYE) qualification and the graduate Early Years Teacher Status (EYTS).<sup>11</sup>

**However, take-up for both qualifications is declining year on year with just 354 new recruits for the latter qualification in 2019 (DfE 2019b).**

The most recent national Early Years Workforce Strategy (DfE 2017b) was deemed ‘critical to supporting the sector to continue to grow and deliver high quality provision’ (p.4), but the workforce has seen little sustained policy attention since and investment and progress has been limited. **Research highlights missed opportunities to develop a qualifications infrastructure and associated career pathways, not only providing a supply of future early childhood education and care staff, but further developing quality provision and thereby improved outcomes for children.**

### 3.4 How important are graduates to children’s outcomes in early childhood education and care?

The Graduate Leader Fund (GLF) was established to support private and voluntary settings in recruiting graduates. [Bonetti \(2020\)](#) concluded that the fund was successful in increasing qualification levels, largely because it was ‘evidence-

based, it was set within a wider and long-term workforce strategy, it was properly funded and provided the right types of incentives for settings to employ high qualified staff.’ (p.6). However, this progress was not embedded, and changes in workforce composition by qualifications were mixed after 2013.

Despite some reform, and the introduction of new qualifications, there remains considerable variation in the recruitment and deployment of graduates across the early childhood education and care sector, specifically between maintained settings and private, voluntary and independent settings. [Stewart and Reader \(2021\)](#) highlight increases in the share of children attending settings with a graduate, across most types of private provision. However, there has been a fall in the share of children eligible for free school meals attending maintained settings, and therefore having access to a qualified teacher.

Research by [Bonetti and Blanden \(2020\)](#) identified a small but positive association between the presence of a graduate in settings (mainly driven by those with Qualified Teacher Status) and children’s later *Early Years Foundation Stage Profile* scores and that these benefits did not fade over time.

However, the content of early childhood degrees also appears to vary significantly. [Campbell-Barr et al. \(2020\)](#) found that the fragmentation of degree content, age of specialisation and practical (work-placement) arrangements are a challenge to the quality of early years degrees. This includes specific concerns

11 Early Years Educator is a Level 3 (A level equivalent) qualification. Qualified Teacher Status (QTS) is the mandatory qualification for teachers in maintained schools. The Early Years Teacher Status (EYTS) qualification is different to QTS, allowing graduates to specialise in working with children up to five years old only. Those with EYTS are predominantly employed in the private and voluntary sectors.

as to whether degrees are covering the content required to both contribute to the quality of early years education and meet the statutory requirements of working in the early years sector.

### 3.5 How important is continuing professional development to quality early education and care and outcomes for children?

A systematic review of literature on professional learning by [Rogers et al. \(2017\)](#) found that programmes that combine new knowledge from research with knowledge gained from participants' own specific experience appear to be most effective at achieving change to practice and having a positive impact on children's learning. The study found mixed results on outcomes for children, but notably positive outcomes when a coaching model was deployed alongside the introduction of new knowledge through effective **continuing professional development**. Additionally, a literature review by BERA/TACTYC (2017) found that local learning communities, and support for practitioner-learners through supervision and mentoring, were key to professional development for quality practice.

Historically, from 2003 to 2010, local authorities took the lead in supporting professional development and quality improvements. More recently

the Prime Minister announced additional funding of £153 million for the professional development of early childhood education and care practitioners, drawing on the latest evidence and with a particular focus on speech and language (DfE 2021b). Following an earlier period of substantial investment, in recent years continuing professional development has become more centralised, driven by the Department for Education's priorities. Arguably, the result is a fragmented series of initiatives which is less responsive and locally customised and lacks a universal, long-term strategy for increasing the skills of the early childhood education and care workforce.

#### Points for discussion

- How might a long-term strategy, including a review of the funding model, improve the low pay and low status of the early childhood education and care workforce?
- Can quality in early childhood education and care be effectively but efficiently measured, and who should be doing it?
- When considering the impact of the quality of early childhood education and care, the literature does not typically consider parents' views. How might parents' views of quality shape provision?

# 4 The impact of early childhood education and care provision

There is a longstanding body of international research, particularly from the US, which shows that **early childhood education and care** provision has a positive impact on young children's outcomes across a range of skills and capacities (Heckman 2011; Waldfogel 2006). This is also reflected in key studies in the UK. However, the evidence is evolving and the context in which early childhood education and care is provided has also changed substantially over the last 25 years as the sector has grown and provision has become more universal.

When looking at the impact of early childhood education and care, it is important to bear in mind a number of factors: quality, quantity, differential take-up, duration of attendance and the age at which a child begins nursery, as well as the social mix. By impact we mean measurable improvements in children's skills and capabilities, including cognitive/intellectual, social and emotional and behavioural development.

The most readily available national measure of children's development at the age of five has been the **Early Years Foundation Stage Profile (EYFSP)**. It measures seven areas of development: communication and language, physical

development, personal, social and emotional development, literacy, mathematics, understanding of the world, and expressive arts and design. Although widely used in research, this measure of outcomes is seen as problematic by some as it is assessed by teachers and some goals are seen as developmentally inappropriate.

The EYFSP is used to ascertain a child's 'school readiness', as defined by a child achieving expected levels in five of the areas of development above. However, the concept, in terms of what constitutes 'readiness', is contested. There are criticisms that definitions and benchmarks might be skewed towards formal educational outcomes and away from other determinants of success through to adulthood. Some of the research studies discussed below use a wider range of objective measures of children's progress.

There are two broad approaches to looking at impact. The first is the impact of early childhood education and care provision in its totality on children's outcomes and the second is the impact of specific and focused interventions that take place within an early years **setting**.

#### 4.1 What do we understand about the impact of early childhood education and care provision on children's outcomes, particularly for the most disadvantaged children?

There have been a number of reviews which bring together and assess the range of evidence on the impact of early childhood education and care provision (Hillman and Williams, 2015; Save the Children UK 2018; Lavallo and Jones 2020). Here we highlight the findings from two major *longitudinal studies* and other key research.

The Effective Pre-School, Primary and Secondary Education study (EPPSE) and its earlier incarnation, Effective Provision of Pre-School Education (EPPE) is a longitudinal study of 3,000 children in pre-school (at age three) in 1997 and

followed until 2014. A sample of children with no or minimal pre-school experience was used as a comparison group. The EPPE study concluded that 'high quality pre-school provision combined with longer duration had the strongest effect on development' (Sylva et al. 2004, p. iv) (see Box 3). **It also emphasized the importance of the home learning environment, which the researchers found had greater impact on children's overall development than parental income, occupation or class** (Sylva et al. 2004).

The EPPE study concluded that good quality could be found in all kinds of early childhood education and care settings but that it was higher overall in *maintained* nursery schools (Sylva et al. 2004). These findings were echoed by Mathers and Smees (2014) who found that government-maintained schools

#### Box 3: Key findings from the Effective Provision of Pre-School Education study (EPPE)

- Pre-school experience, compared to none, enhanced children's all-round development, and high-quality pre-school was related to better cognitive and social and emotional development.
- These positive effects of quality pre-school provision were present at age six; by the age of seven the impact was slightly weaker for academic attainment and had faded out for social and emotional development.
- Attending pre-school for a longer duration in terms of months improved children's independence, concentration and sociability.
- Starting earlier, before the age of three, improved intellectual development. However, children who started before the age of two in group settings, had slightly increased behaviour problems at age three and five.
- Going to pre-school part time (half a day) was found to be just as good as having attended full time.
- Pre-school was particularly beneficial to children who were more disadvantaged, especially when they were with a mixture of children from different social backgrounds.

Source: Sylva et al. 2004

located in disadvantaged areas and serving disadvantaged children offered quality for three- and four-year-olds that was comparable (and in some cases higher) than schools serving the more advantaged. Within the **private, voluntary and independent sector**, quality for three- and four-year-olds was lower in settings located in deprived areas and attended by children from disadvantaged backgrounds. This was most evident in relation to the quality of interactions; support for learning, language and literacy; and provision for diversity and individual needs. Additionally, [Gambaro et al. \(2015\)](#) suggest that children from disadvantaged backgrounds have access to better qualified staff as they are far more likely to access a school nursery class or nursery school. However, given what we know about take-up of places, **it is important to note that children from disadvantaged backgrounds are less likely to attend early childhood education and care settings, even for government-funded hours** (DfE 2017), hence the importance of boosting uptake within this group.

The Effective Pre-School, Primary and Secondary Education study (EPPSE), which looked at longer term outcomes,

found sustained improvement in educational outcomes for those children who had attended early years education, with greater likelihood of achieving more than 5 GCSEs at grade A-C. Children who had experienced high quality provision were more likely to undertake an academic path after the age of 16 and had stronger self-regulation skills, better social behavioural outcomes and were less likely to be hyperactive (Waldren 2017).

Recent research has shown more mixed results. In a study on the impact of nursery attendance in private, voluntary and independent nurseries, [Blanden et al. \(2018\)](#) found that free part-time nursery places for three-year-olds enabled some children to do better in assessments at the end of Reception, but overall educational benefits were small and did not last. While there was modest evidence that the policy had more impact on the poorest, most disadvantaged children, it did not close the gap in attainment between those from richer and poorer families in the longer term. Children taught by a highly qualified staff member and those who attended settings rated as Outstanding by **Ofsted** scored slightly higher. However, the research found there

#### **Box 4: Key findings from The Effective Pre-School, Primary and Secondary Education study (EPPSE) on narrowing gaps**

- The effect of receiving pre-school education on GCSE results was more than twice as large for children whose mothers had low educational qualifications compared with the whole sample.
- The quality of provision had little or no effect on GCSE qualifications, unless it was very high.
- The effect of high quality provision was also larger for children with mothers with low educational qualifications.

Source: Cattan et al. 2014

were substantial unexplained differences in outcomes between nurseries. The International Early Learning and Child Wellbeing Study (2020), which analyses gaps in children's development, found that once socioeconomic status was taken into account, there were very few differences that were explained by the use of early childhood education and care provision. These differences in findings between studies are partly explained by different methodological approaches and the fact that use of early childhood education and care has become much more widespread (see Annex for a more detailed explanation).

This mixed picture is also evident from the latest report from the Study of Early Education and Development (SEED) (Melhuish and Gardner 2020), a longitudinal study that follows 6,000 children in England from age two to seven (see Box 5). As Stanford (2021) argues,

these later findings need to be seen in the context of the wider body of research where early education and care were found to have a significant impact and the latest research on the effects of children missing out on pre-school experience as a result of COVID-19.

While the number of hours of early childhood education and care that children receive is important, **there is no consensus on the 'ideal' number of hours per week required to support children's outcomes** (Lavage and Jones 2020). In reality, we know little about the extent to which children access their full entitlements in terms of number of hours per week attendance. Recent international evidence from the US National Institute of Child Health and Human Development study examined the quantity and quality of day care on children's outcomes (Belsky et al. 2020). It found that in the US better quality care had a positive

### Box 5: Key findings from the Study of Early Education and Development (SEED)

- A small positive impact of informal childcare (relatives, friends, nannies) between the age of two and the start of school on children's verbal ability.
- No impact for the use of formal early education (group based or childminder provision).
- Some poorer social and emotional outcomes were associated with formal early education, particularly those using group provision for a high number of hours from age two. This differs from earlier SEED findings which found positive effects for most socio-emotional outcomes at ages three and four (see Annex).
- For the 40% most disadvantaged children, using a minimum of ten hours per week of formal early education and childcare no later than age two, combined with a mean use over twenty hours per week between age two and the start of school, increases the chances of achieving expected EYFSP levels in school reception year and improves children's verbal ability in school year one.

Source: Melhuish and Gardner 2020; Stanford 2020



impact on children's cognitive skills, but that early, extensive and continuous care predicted more social and behavioural difficulties for children at age two, school transition and in adolescence. While not directly comparable to the UK, this suggests that policy needs to consider both the quality and the quantity of early childhood education and care and how it affects different kinds of child outcomes.

Sure Start Children's Centres (see Section 1) were set up to provide an integrated service for parents with children under four, beginning in deprived areas. While the evidence for the impact of Sure Start was initially mixed, by 2010 results showed improved children's health and lower body mass index, improvements in the home learning environment, less chaotic home environment and less harsh discipline (Eisenstadt and Oppenheim 2019). Later evaluation of children's centres (Sammons et al. 2015) found positive outcomes related to the greater use of centres by the most disadvantaged families, inter-agency working and the availability of named programmes. More recently, [Cattan et al. 2021](#) found a causal impact of Sure Start on health outcomes, including reduced hospitalisations, with the greatest benefit in the poorest areas. Longer term impacts of Sure Start include stronger immune systems, safer parenting practices and home environments and improved emotional and behavioural development among children.

### In summary

- There is a longstanding body of research that suggests pre-school provision can have positive impacts on early childhood cognitive and non-cognitive skills in the short-term, but more recent research shows that some of these impacts fade out in primary school.

- However, there is evidence of positive longer-term impacts of early childhood education and care provision for young people and adults in relation to exam performance, the labour market and some other outcomes.
- Positive impacts are larger for children from disadvantaged backgrounds.
- There is some evidence that long hours of early childhood education and care provision can be negative in relation to social and emotional development.
- The quality of provision is a key factor influencing outcomes, especially for children from disadvantaged backgrounds. It may be that quality of provision needs to be very high to make a sustained difference to disadvantaged children.
- Other important factors which influence outcomes for disadvantaged children are the starting age for early childhood education and care provision and months of attendance.
- The home-learning environment and parent-child relationship play a critical role in shaping children's outcomes.
- Integrated children's centres where services are organised around the needs of parents and young children have been shown to impact positively on parenting and children's outcomes, with greater effect in deprived areas.

The findings and insights from this body of research raise important questions for how early childhood education and care is organised and funded and the role of public subsidy in providing it.

## 4.2 The Impact of specific interventions

There is a growing body of research that sheds light on the effects of specific

interventions on young children's learning and development. It is not possible to do justice to this body of work within this review. The Education Endowment Foundation and the Early Intervention Foundation Guidebook offer a valuable resource on the evidence underpinning a large number of such interventions.

Early language and communication has been a strong theme in the Nuffield Foundation's priorities, reflecting the early gaps between children that develop before the age of two and the role that these skills have in shaping academic skills, self-regulation and social and emotional capabilities. Box 6 features two examples of early language initiatives and two that focus on the development of mathematics skills in young children.<sup>12</sup> The value of this research is that it is fine-grained, providing insight into both effective elements and those that are not effective, as well as the details of what makes for good practice and implementation. Key challenges for specific interventions are whether they reach disadvantaged children and families,

the impact they have on narrowing gaps, and how to implement and replicate positive findings.

### Points for discussion

- How can early childhood education and care settings further engage and support parents and carers to enhance the learning and development of young children at home?
- If early childhood education and care provision needs to be very high quality to make a significant difference to narrowing the gaps between disadvantaged children and others, should this be prioritised over expansion of universal entitlements for all children?
- How can multiple services for babies, toddlers and pre-schoolers be better integrated and coordinated, starting from the places and services that children already access?

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12 For information about more early childhood education and care research and development projects funded by the Nuffield Foundation, visit [www.nuffieldfoundation.org/research/education/early-years](http://www.nuffieldfoundation.org/research/education/early-years)

## **Box 6: Examples of early childhood education and care projects funded by the Nuffield Foundation**

### **The Nuffield Early Language Intervention (NELI)**

NELI was created by a team led by Professors Margaret Snowling and Charles Hume in 2012. It is aimed at children in reception with language difficulties or delays, representing 15–20% of children nationally. NELI focuses on developing children's vocabulary, listening and narrative skills and activities to provide the foundations for early literacy. It is delivered by teaching assistants and early years educators over a 20-week period (Snowling et al. 2012).

Robust trials of the programme funded by the Education Endowment Foundation show that children participating in NELI make on average at least three months of additional progress in oral language skills (Dimova et al. 2020). The Department for Education funded a first phase roll-out of NELI to some 7,000 primary schools and is funding a second phase to a further 6,000 schools as part of its COVID-19 catch up programme. There is a particular focus on schools servicing the most disadvantaged pupils. NELI will also be piloted in nursery settings.

### **Evaluation of the 'Get Ready for Learning' programme**

This study evaluated the 'Get Ready for Learning' programme, an oral language intervention designed for children with English as an additional language and monolingual children with language

weakness. The programme was found to be successful in teaching new vocabulary to children in both groups but did not result in improvements to more general language skills (Bowyer-Crane et al. 2015).

### **Improving pre-schoolers number foundations**

This study sought to investigate whether pre-schoolers' 'number sense' (ability to estimate and compare quantities without counting them) could be improved through regular playing of specially-designed games. It found that playing these games for ten minutes a day for a five-week period improved young children's number foundations—the essential building blocks needed for mathematics. This improvement was still apparent six months later (Van Herwegen and Donlan 2018).

### **Using manipulatives in the foundations of arithmetic**

This study examined how the use of objects or materials that children can move (also known as manipulatives) can help them learn mathematical and other concepts. It concluded that manipulatives support children to make sense of arithmetic, increase engagement and provide a bridge to abstract thinking. Based on their findings, as well as work with teachers and children, the researchers developed practical guidance on the use of manipulatives in the teaching of arithmetic (Griffiths et al. 2017).

# 5 Conclusions

The **early childhood education and care** landscape has changed radically over the last 25 years, from a patchwork of provision to a universal service for those aged three and above. There is widespread acceptance of the need for early childhood education and care, though with differences in investment and focus between political administrations. Our understanding of the nature and impact of provision has evolved in light of research evidence and experience of implementing government initiatives. Gains have been made in the expansion of services and, until recently, steady improvement in outcomes for young children have been achieved, but there remain key questions about the future direction of early childhood education and care provision.

We have a growing understanding of a diverse and evolving early childhood education and care system including evidence of the acquisition of individual nurseries by larger nursery chains and a reduction in the number of childminders. Analysis of the financial operations of individual or smaller scale providers and a better understanding of third sector provision would support a more comprehensive picture of the market and the specific challenges to sustainability. We know that availability, affordability and capacity of provision varies across the country and concerns remain over both equity of access to early childhood education and care provision by all children and the stability of **settings**.

As families emerge from the pandemic, demand for childcare will change, and these changes in demand,

coupled with historic underfunding for settings create a complex dynamic.

**Tensions exist between quality of education and care, affordability for parents and sustainability of provision.** This points to a dysfunctional early childhood education and care 'market' which needs urgent attention and raises broader questions about whether the plurality of provision or a more 'school like' uniformity in the system is advantageous.

Given the total annual spend of £5.7 billion a year on early childhood education and care in England, there is an immediate need to ensure this public funding is deployed effectively in reaching the children and families for whom it is intended, as well as a question of whether it is sufficient. The 30 hours policy, with its aim of enabling parental employment, and the reduction of support through tax credits/universal credit, have led to a shift in **funding away from low-income families towards middle-high earning families (Stewart and Reader 2021)**.

While all families have entitlement to some early education and care, there is concern that the funding system is becoming less focused on lower income families, whose children have most to gain from provision.

In addition, some parents find it difficult to navigate the highly complex landscape of funding, and funds such as the Tax-Free Childcare scheme are underutilised. This complexity also affects the sustainability of providers, and **the case continues to be made for an overhaul of the early childhood education and care funding system with the aim of ensuring quality of provision**

**for children, affordability for parents, and improved remuneration for the workforce.**

The evidence shows that the early childhood education and care workforce is key to improving outcomes for children, but there is a lack of both a national long-term strategy and sufficient investment to improve qualification levels and develop the workforce. Such a strategy is central to improving the quality of early childhood education and care and supporting the outcomes of the most disadvantaged children. There is a need to explore how public funding mechanisms might be better deployed to incentivise increases in qualifications and higher quality provision. A related factor is the need to understand how qualifications of staff working with very young children (aged from birth to two) differ from staff working with older children. Meanwhile, actions to address the low pay and status of the profession and the recruitment challenges of early childhood education and care settings remain pressing.

A key tension exists between providing universal and targeted services, and in the case of the latter, defining the groups for particular attention. In particular, with the reduction in Sure Start, there would appear to be little policy attention on early education and childcare for children under two, and little research to understand what quality provision looks like for these very young children. **There is also a need for improved understanding of how multiple services for babies and toddlers can be better integrated and coordinated, starting from the places and services children already access.**

More broadly, questions remain about whether the right balance is being struck between, on the one hand, **supporting child development and learning through high quality early education, and on the other hand**

**increasing parental employment through access to flexible and affordable childcare.** This remains a central and ongoing debate over the purpose/s of early childhood education and care in improving the life chances of young children.

Progress in closing the gap between disadvantaged children and their more advantaged peers has stalled in recent years. It is likely that the combination of increasing rates of child poverty and the differential impact of the pandemic on children's learning risks potentially widening the inequality gap. In addition, some children with **SEND** and Looked After Children appear to be missing out on funded hours, demonstrating a need to better understand the barriers to access and for action to provide education and care more responsive to their needs.

While we know pre-school provision is beneficial to the educational and social development of children regardless of their background, the evidence is mixed on the features of the provision which might lead to better lasting outcomes. **There is a need for research that focuses on what drives quality and how it impacts on outcomes.**

There are numerous interventions that aim to improve different aspects of young children's learning and their social and emotional development, some of which are discussed in this review. However, many interventions do not adequately capture differences in effectiveness between children by socioeconomic status, gender and ethnic group and how these factors combine. Additionally, there is limited research on how specific interventions can be integrated into wider practice.

The pandemic has deeply affected individuals and communities, but it is also creating opportunities and policy spaces for new ideas. As we emerge from the pandemic, a whole-system review of early childhood services is needed, one which

articulates a clarity of purpose and which meets the needs of both young children and their families and makes a difference to disadvantaged children in particular. Given the weight of evidence highlighting the complexities and inefficiencies of current programmes, the time is right for a wholesale evaluation of the purpose and provision of early education and

care, learning from what has and has not worked over the last two decades, to create a national early years strategy. Such a review would draw together the wealth of data and research reviews and multiple stakeholders to create a bold, ambitious vision for early childhood education and care for the twenty first century.

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## Explaining the differences between studies on the effectiveness of early education and care

### 1 Why have later studies such as Blanden et al. (2018) and The Study of Early Education and Development (SEED) (Melhuish and Gardner 2020) shown more mixed results about the impact of early childhood education and care on children's outcomes?

There are a number of possible explanations for the differences in the findings between studies; these are both to do with the changing context of early childhood education and care provision and different methodological approaches.

The landscape of provision has changed markedly over the last 25 years from being a skeleton service to a virtually universal one. In EPPE/EPPSE<sup>13</sup> it was possible to compare children who had experience of early childhood education and care provision with those who had none. Later studies compare those who are receiving early childhood education and care provision with lower usage/duration, so differences in effects are likely to be smaller. EPPE captured children's development at the end of pre-school provision, i.e., before entering reception/primary school and so was able to isolate

the specific contribution of early childhood education and care provision. Studies that rely solely on the *Early Years Foundation Stage Profile* which is conducted in reception year are also likely to reflect the experience of primary school, making it more difficult to distinguish the specific contribution of experience prior to starting school. Over the 2000s, not only did provision expand substantially, but there was also heavy investment and reform in primary education. Hillman and Williams (2015) suggest that the weakening of effects of early childhood education and care on outcomes as children proceed through primary school could be characterised as catch-up from primary school inputs rather than fade-out of early years inputs. EPPE/EPPSE also used a wider range of outcomes and more detailed attainment scores, so capturing a richer range of outcomes than those captured in Blanden et.al. (2018). However, it may also be that EPPE/EPPSE was not fully able to control for what are called 'selection effects' i.e., parents that choose to use pre-school provision and those who do not, which could amplify the positive outcomes.

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13 The Effective pre-school, primary and secondary education study (EPPSE) and its earlier incarnation, Effective Provision of Pre-School Education (EPPE), a longitudinal study of 3,000 children in pre-school (at age 3) in 1997 and followed until 2014. See Section 4.

## 2 Why do some studies show that some impacts of early childhood education and care provision taper away in primary school, but have later positive impacts at the age of 16 and beyond?

One of the interesting features of both UK and international studies of the effects of early childhood education and care provision is that while shorter-term outcomes are mixed and appear to fade-out for some outcomes during primary school, there are positive longer-term outcomes in relation to later educational qualifications, employment and earnings, especially for disadvantaged children. A recent systematic review (Dietrichson et al. 2020) found that universal pre-school programmes had mixed results on test scores in school and social and emotional outcomes, but that on measures of school progression, years of schooling, highest degree completed, employment and earnings there were beneficial outcomes on average and a positive benefit to cost ratio. It also

found greater benefit for those from more disadvantaged backgrounds and no consistent differences between boys and girls. The authors suggest that longer-term measures (e.g., earnings and employment) may better capture the full effects of universal provision because these are influenced by a wider set of skills, such as personal qualities, than can be measured earlier on.

## 3 Why do the later results from SEED show detrimental impacts of early childhood education and care provision on social and emotional development?

This may be because different measures of social and emotional development were used. At earlier ages parents recorded social and emotional development, but at age five it was teachers who made that assessment. It may also be because children had just undergone a transition into primary school (Stanford 2020). However, it could be a real effect.

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The content and conclusions of the  
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## About the Nuffield Foundation

The Nuffield Foundation is an independent charitable trust with a mission to advance educational opportunity and social well-being.

We fund research that informs social policy, primarily in Education, Welfare and Justice. We also provide opportunities for young people to develop skills and confidence in science and research.

We are the founder and co-funder of the Nuffield Council on Bioethics, the Nuffield Family Justice Observatory and the Ada Lovelace Institute.

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