Murdoch Childrens Research Institute
Healthier Kids. Healthier Future.

CHILDCARE AND EARLY CHILDHOOD LEARNING: Response to the Productivity Commission's Inquiry into Childcare and Early Childhood Learning

Centre for Community Child Health

February 2014

The Royal Children's Hospital Melbourne

Acknowledgements

This submission was written by Dr. Tim Moore and Dr. Myfanwy McDonald, from the Centre for Community Child Health's Research and Policy team. Expert advice and input was provided by Rachel Robinson, Associate Professor Sharon Goldfeld, Sue West & Professor Frank Oberklaid.

Suggested citation

Moore, T.G., McDonald, M., Robinson, R., Goldfeld, S., West, S., & Oberklaid, F. (2014). **Childcare and early childhood learning: Response to the Productivity Commission's Inquiry into Childcare and Early Childhood Learning.** Parkville, Victoria: Centre for Community Child Health, Murdoch Childrens Research Institute, The Royal Children's Hospital.

Centre for Community Child Health
The Royal Children's Hospital Melbourne
50 Flemington Road Parkville Victoria 3052 Australia
TELEPHONE +61 9345 6150
EMAIL enquiries.ccch@rch.org.au
WEBSITE www.rch.org.au/ccch

Table of Contents

1. Summary

The Centre for Community Child Health (CCCH) at the Murdoch Childrens Research Institute (MCRI) and The Royal Children's Hospital has prepared this submission in response to the Productivity Commission's Inquiry into Childcare and Early Childhood Learning.

The CCCH has been at the forefront of Australian research into early childhood development and behaviour for over two decades and has a strong commitment to supporting communities to improve the health, development and wellbeing of all children. We welcome the opportunity to contribute to this important debate.

In this submission, we rely upon evidence from two decades of research synthesis work to address a number of topics highlighted in the Productivity Commission's *Childcare and Early Childhood Learning Issues Paper* (childcare and early childhood learning is referred to in this document as Early Childhood Education and Care). These six topics, along with our key messages for each, are summarised below.

We conclude with a description of the four most significant issues pertaining to the future of childcare and early learning (referred to here as Early Childhood Education and Care (ECEC) in Australia

The role of government in early childhood education and care

- Continued government investment in high quality early childhood education and care is a means of ensuring Australia's long-term productivity, addressing social inequities, and fulfilling Australia's obligations under the UN Convention on the Rights of the Child.
- Governments have a role to play in their continued support for strategies and initiatives designed to promote and improve outcomes for children during the early years such as the National Early Childhood Development Strategy and the National Framework for Protecting Australia's Children.
- Governments have a role to play in supporting policies, strategies and initiatives that provide targeted support to children and families who are experiencing significant difficulties during the early years. Intervening early in a child's life reduces the potential for harm and is significantly more cost effective than interventions that occur later in a child's life.

Desirable outcomes for early childhood education and care

- The most desirable outcome of early childhood education and care is to provide children with the functional skills or capabilities they need to participate meaningfully in their daily environments. This outcome aligns well with the core outcomes of the national Early Years Learning Framework
- In regards to outcomes for children, a priority for the next decade is to provide continuing support for the implementation of the Early Years Learning Framework to ensure that all ECEC services are able to support all young children to achieve this outcome
- Timely support for families – provided either directly or indirectly – is a desirable (and achievable) outcome of early childhood education and care. Support for families is important to ensuring optimal home learning environments for children during the early years

- In regards to outcomes for families, priorities for the next decade are: to expand the capacity of ECEC services to provide family-friendly environments and programs to

  address family needs and promote parenting skills; and to improve the ability of ECEC services to detect emerging child and family problems through the systematic use of surveillance and screening tools.

- An integrated early childhood service system is a desirable outcome for all services that work with young children and their families, including ECEC services. Such systems should be place-based, should use whole-of-community or 'collective impact' approaches and should involve co-design and co-production approaches
- In regards to outcomes for the service system, priorites for the next decade include: to build a tiered system of services based on universal provision; and improve the interface between communities and services.

The type of families that will require early childhood education and care in the future

- Disadvantaged families are more likely to face barriers accessing and remaining engaged with early childhood education and care services
- The introduction of universal access to preschool for children in the year prior to school will go some way towards improving utilisation of ECEC services by disadvantaged families however some families face additional barriers
- These families would benefit from services that have an outreach capacity, as well as those services which facilitate co-production and co-design of services

The effect of different types of early childhood education and care

- Children's development does not depend upon ongoing exclusive care from their biological parents. What matters most is that children receive responsive caregiving from a small number of consistently available caregivers
- In general the evidence indicates that ECEC programs (not including preschool) sometimes pose risks to young children, and sometimes confer benefits, but their impacts are best understood in conjunction with other potent influences(e.g. family resources, the quality of parental care)
- In regards to preschool, the longer the duration of attendance beyond the age of 3 years, the greater the benefits, particularly for children from disadvantaged backgrounds. Children who attend preschool full-time do not have better (or worse) outcomes than children who attend preschool part-time
- Corporate for-profit ECEC services can have competing obligations that impact negatively on the quality of the service provided, thereby highlighting the importance of the government's role in overseeing the implementation of universal quality standards for ECEC

ECEC services for young children with disabilities and developmental delays

- There are significant gaps between the ECEC opportunities for children with additional needs and those of other children
- There has been little change in inclusion of children with disabilities in ECEC services and little debate regarding how this can be achieved
- All early childhood settings, with the necessary supports and resources, can enhance the learning, development and participation of children with developmental disabilities.

- In order for this to occur: ECEC services need to strengthen their capacity to provide individualised programs for all children; and the specialist early childhood intervention

  services need to increase the support they provide to ECEC services in meeting the needs of individual children with developmental disabilities.

Staff ratios and qualifications and outcomes for children

- Lower staff-to-child ratios and higher staff qualifications are associated with better outcomes for children in early childhood education and care. However, the relationship between these factors and child outcomes are complex.
- Improving staff-to-child ratios and staff qualifications is likely to have a positive impact on outcomes for children however improvements are unlikely to be immediate and will be dependent upon process factors and issues such as leadership and management.

Conclusions

Overall, the evidence indicates four highly significant key issues pertaining to the future of childcare and early learning (referred to here as Early Childhood Education and Care (ECEC) in Australia:

- When considering ECEC, it is the long-term well-being and productivity of those who are currently young children that is at stake. Those children who receive less than optimal care at home and in early childhood settings during infancy and the preschool years will be more likely to have compromised developmental and health outcomes, and less likely to enter adulthood willing and able to participate fully in the civic and economic life of society.
- The continued implementation of existing frameworks that aim to improve the quality of ECEC programs in Australia, such as the National Quality Framework, is critical to ensure all Australian children have equal opportunities during the early years, regardless of where they live or their socioeconomic background.
- ECEC services need to be an integral part of a wider service system that is capable of addressing the additional needs and challenges experienced by many young children and their families. Major changes are required to service system as a whole to ensure it can meet the increasingly complex needs of children and families in a systematic, holistic way.
- In order to improve the delivery of childcare services to children with disabilities and development delay, ECEC services need to strengthen their capacity to provide individualised programs for all children, including children with additional needs. Furthermore, specialist early childhood intervention services need to increase the support they provide to ECEC services in meeting the needs of individual children with developmental disabilities.

As the evidence regarding the importance of the early years continues to accumulate, the critical nature of our decisions about early childhood education and care become more and more apparent.

2. Introduction

In 2013 the Australian Productivity Commission announced an Inquiry to examine and identify future options for early childhood education and care (ECEC) in Australia. The Productivity Commission asked individuals and organisations to prepare submissions to the Inquiry based upon a number of issues outlined in the *Childcare and Early Childhood Learning: Issues Paper* (Productivity Commission, 2013).

The following document is a submission to the Productivity Commission from The Centre for Community Child Health (CCCH) at the Murdoch Childrens Research Institute (MCRI) and The Royal Children's Hospital.

The CCCH has been at the forefront of Australian research into early childhood development and behaviour for over two decades and has a strong commitment to supporting communities to improve the health, development and wellbeing of all children.

Established in 1994, and located at The Royal Children's Hospital, Melbourne, CCCH works in collaboration with our campus partners - the Murdoch Childrens Research Institute and the University of Melbourne - to integrate clinical care, research and education in community child health. We provide leadership in early childhood and community health at community, state, national and international levels, and are widely recognised for our clinical, teaching, research and advocacy programs.

All the views expressed in this submission are evidence-based. The evidence we rely upon comes from the research synthesis work we have undertaken over the past two decades. This work has focused upon the most effective ways of promoting early childhood health, development and well-being, and in working with services and service systems to devise more responsive and integrated supports for young children and their families.

In the following document we address 6 topics highlighted in the *Issues Paper*:

- The role of government in early childhood education and care (in response to issues raised in p. 5-6 of the *Issues Paper*);
- Desirable outcomes for early childhood education and care (in response to issues raised in p. 5-6 of the *Issues Paper*);
- The type of families that will require early childhood education and care in the future (in response to issues raised in p. 8-11 of the Issues Paper);
- The effect of different types of early childhood education and care (in response to issues raised in p. 11-12 of the Issues Paper);
- Young children with disabilities and developmental delays (in response to issues raised in p. 18-19 of the Issues Paper); and
- Staff ratios qualifications and outcomes for children (in response to issues raised in p. 24-25 of the Issues Paper).

For each of these topics, we have included a brief review of the evidence and a brief summation of the implications of that evidence for the specific questions that the Productivity Commission has asked.

3. The role of government in early childhood education and care

Key messages

- Continued government investment in high quality early childhood education and care is a means of ensuring Australia's long-term productivity, addressing social inequities, and fulfilling Australia's obligations under the UN Convention on the Rights of the Child.
- Governments have a role to play in their continued support for strategies and initiatives designed to promote and improve outcomes for children during the early years such as the National Early Childhood Development Strategy and the National Framework for Protecting Australia's Children.
- Governments have a role to play in supporting policies, strategies and initiatives that provide targeted support to children and families who are experiencing significant difficulties during the early years. Intervening early in a child's life reduces the potential for harm and is significantly more cost effective than interventions that occur later in a child's life.

The Productivity Commission has expressed an interest in the question what role, if any, the different levels of government should play in childcare and early childhood education (p. 6).

At present the Federal Government focuses its ECEC investment on supporting workforce participation, correcting for market failure and promoting inclusion and equity. State and territory governments provide support for preschool education and local governments play the role of service provider and/or provide infrastructure and other operational support in their local area. A range of for profit and not-for-profit services complete the picture by providing care and education services and operational supports such as training, employment support and advocacy.

While these policy arrangements have resulted in some duplication of effort, in general this 'mixed market' of services broadly meets the needs of most Australians. There is, however, a question regarding the future roles of the different levels of government in regards to ECEC.

In the following sections we review evidence relevant to this question and describe the implications of this evidence for the roles of different levels of government.

3.1 The importance of early childhood

Evidence

- Over the past few decades, there has been a growing acceptance among scholars, professionals and policy makers of the importance of the early years (Centre on the Developing Child at Harvard University, 2010; Field, 2010; National Scientific Council on the Developing Child, 2007; Shonkoff & Phillips, 2000; Shonkoff et al., 2009; Shonkoff, 2012). However, as we learn more about the way in which experiences in the early years shape health, development and well-being, and the extent of these influences over the life-course, the true importance of these years becomes more and more apparent.
- There are multiple related bodies of research that demonstrate the importance of the prenatal and early years for long-term health, development and well-being (see Moore & McDonald, 2013, for a fuller summary). Key findings include the following.

- First, prenatal environments begin laying down biological patterns that can have life-long effects on health and well-being (Gluckman & Hanson, 2004; Martin & Dombrowski, 2008; NSCDC, 2006; Paul, 2010; Shonkoff & Phillips, 2000).
- Second, children's development is profoundly shaped by their early relational and learning environments – family environments having the greatest impact, but ECEC and community environments also play significant roles.
- Third, learning develops cumulatively – the skills acquired early form the basis for later skill development, while failure to develop basic skills impedes all subsequent learning (Cunha et al., 2006; Field, 2010; Rigney, 2010).[1]
- Fourth, discrepancies between children from advantaged and disadvantaged backgrounds emerge early and widen steadily (Halle et al., 2009; Heckman, 2008; Nicholson et al., 2010; Strategic Review of Health Inequalities in England post-2010 Committee, 2010).[2]
- Fifth, chronic stress and cumulative adverse experiences have powerful negative effects on children's neurological and biological development, with long-term effects upon health and well-being (Anda et al., 2006; Shonkoff, 2012).[3]

Implications

The accumulating research evidence indicates that, when considering childcare and early learning, it is the long-term well-being and productivity of those who are currently young children that is at stake. Those children who receive less than optimal care at home and in early childhood settings during infancy and the preschool years will be more likely to have compromised developmental and health outcomes, and less likely to enter adulthood willing and able to participate fully in the civic and economic life of society. The longer their exposure to less than optimal environments in the early years, the less likely they are to achieve positive long-term developmental outcomes.

Australian governments have responded to evidence regarding the importance of early childhood by articulating a National Early Childhood Development Strategy (Council of Australian Governments, 2009a), developing a National Framework for Protecting Australia's

---

[1] One result of this effect is that a significant minority of children arrive at school poorly equipped to take advantage of the learning and social opportunities that schools provide (CCCH & Telethon Institute for Child Health Research, 2007, 2009). Economic analyses demonstrate the impact of early environmental experiences on the development of child, adolescent, and adult cognitive and non-cognitive capabilities. These capabilities are, in turn, associated with educational attainments, earnings, criminal behaviour, and participation in risky behaviours (Heckman, 2012), all of which contribute to a reduction in national productivity.

[2] In every society, regardless of wealth, differences in socioeconomic status translate into inequalities in child development (Hertzman et al., 2010; Strategic Review of Health Inequalities in England post-2010 Committee, 2010). These development discrepancies are evident across cognitive, social, behavioural, and health outcomes, and accumulate throughout life (Strategic Review of Health Inequalities in England post-2010 Committee, 2010).

[3] Chronic exposure to adverse experiences such as child abuse and neglect causes physiological disruptions that affect the developing brain (as well as other biological systems) in ways that can lead to long-term impairments in learning, behaviour, emotional reactivity, and health (Evans & Whipple, 2013; Miller et al., 2011; Naughton et al., 2013; NSDC, 2010; Shonkoff & Richter, 2013; Taylor & Rogers, 2005).

Children (Council of Australian Governments, 2009b), committing to a human capital agenda (Banks, 2010), and increasing their investment in early childhood education and care (DEEWR, 2010).

Another way in which the Australian Government has responded to the accumulating evidence regarding the importance of the early years is by funding Australian Early Development Index (AEDI) (http://www.rch.org.au/aedi/). This is a full population census of children's health and development in their first year of formal full-time schooling, and provides a comprehensive map of early developmental outcomes across Australia.

As the latest report illustrates (Centre for Community Child Health and Telethon Institute for Child Health Research, 2013), the AEDI is proving to be a powerful tool for monitoring the impact of early childhood services, both at a national and community level. It is also providing a rich and unusually comprehensive dataset for researchers (eg. Goldfeld et al., 2012), and should continue to be funded as part of ongoing efforts to monitor and improve child care and other early childhood services

The evidence regarding the importance of early childhood provides a strong justification and incentive for government to continue these investments in early childhood education and care as a means of ensuring Australia's long-term productivity, addressing social inequities, and fulfilling Australia's obligations under the UN Convention on the Rights of the Child.

3.2 The importance of high quality early childhood education and care

In regards to high quality early childhood education and care, there are a number of important issues to consider, each of which are explored further below:

- Evidence of the efficacy of high quality ECEC;
- Key features of effective ECEC services (interpersonal and structural);
- Economic benefits of investment in ECEC services; and
- Inequities in outcomes and services.

Evidence of efficacy

- Attendance at high quality early childhood services has positive impacts on children's cognitive development and learning, both in the short- and long-term (Apps et al., 2012; Barnett et al., 2004; Boyd et al., 2005; Doherty, 2007; Early Childhood Knowledge Centre, 2006; Elliott, 2006; Gormley, 2007; Howes et al., 2006; Mitchell et al., 2008; Phillips & Lowenstein, 2011; Sammons, 2010; Sammons et al., 2007, 2013; Sylva et al., 2010; Vandell et al., 2010; Work and Family Policy Roundtable, 2006). Children who do not attend any preschool program are more likely to be developmentally vulnerable at school entry, lacking the key cognitive, linguistic and self-regulatory skills they need to benefit from the school environment (Sylva, 2010).
- When early childhood education and care programs are high quality, they make a positive contribution to the development and school readiness of all children that participate (Boethel, 2004; Bowes et al., 2009; Elliott, 2006; The Future of Children, 2005; Melhuish, 2003; Melhuish et al., 2004, 2006, 2008; Peisner-Feinberg & Yazejian, 2010; Sammons, 2010; Sammons et al., 2007; Shonkoff & Phillips, 2000).
- High quality early childhood programs yield more positive benefits than those of lesser quality, especially for children from disadvantaged backgrounds (Apps et al., 2012; Cunha et al., 2006; Elliott, 2006; Harrison, 2008; Magnuson et al., 2007; Magnuson & Waldfogel, 2005; Melhuish et al., 2006; Peisner-Feinberg & Yazejian, 2010; Phillips &

Lowenstein, 2011; Sammons, 2010; Sylva et al., 2004; Sylva, 2010; Votruba-Drzal et al., 2013).

- Lower quality ECEC programs are experienced as more stressful by children (Gunnar et al., 2010; Sims et al., 2006).
- The E4Kids study[4] uses standardised measures of quality and findings indicate that ECEC services in Australia are generally performing well on measures of quality relating to emotional support and classroom organisation however they perform less well on measures relating to instructional quality (Tayler et al, 2013). Services assessed under the new quality framework reflect this finding with services least likely to meet the standard in: Quality Area 1 - Educational program and practice and Quality Area 3 - Physical environment. The average quality in ECEC programs varies systematically across the type of service, with kindergartens having significantly higher quality than long day care centres (Tayler et al., 2013).

Key features of effective ECEC services

- Effective community-based services for children and families, including ECEC services, share a number of key interpersonal and structural features (CCCH, 2006, 2013).
- Key interpersonal features of effective early childhood services are:
  - The integration of child care and education functions (Best Start Expert Panel on Early Learning, 2006; Brauner et al. 2004; CCCH, 2007; Elliot, 2006; Friendly, 2008; Gallagher et al., 2004; Press, 2006; Sammons, 2010; Work and Family Policy Roundtable, 2006).[5]
  - Responsive and caring adult-child relationships (Lally, 2007; Lloyd-Jones, 2002; Melhuish, 2003; Moore, 2006; Phillips & Lowenstein, 2011; Sammons, 2010). For infants and toddlers, forming attachments with caregivers is particularly important (Lally, 2007).[6]
  - Parents and families are recognized as having the primary role in rearing children and are actively engaged by early childhood services (Bennett, 2007; Best Start Expert Panel on Early Learning, 2006; David, 2003; Elliott, 2006; Kagan, Britto et al., 2005; Lloyd-Jones, 2002; Mitchell et al., 2008; OECD, 2006; Te Whäriki - New Zealand Early Childhood Curriculum Framework, Ministry of Education, 1996).[7]
  - There is a continuity of children's experience from home to centre – that is experiences, customs and relationships that are important in the home environment are recognised and practiced in the centre environment (Bennett, 2007; Lally, 2007;

[4] http://education.unimelb.edu.au/news_and_activities/projects/E4Kids

[5] Care and learning are inseparable concepts: 'Since all quality early childhood settings provide both care and education, a caring, nurturing environment that supports learning and early development is an essential component of a framework for early learning' (Best Start Expert Panel on Early Learning, 2006). Elliott (2006) argues that it is 'conceptually and ethically inappropriate to separate the care and education functions'. The younger the child, the more important it is to recognise the inseparability of care and learning: 'Every moment in which an adult provides care to a young infant is a moment rich with learning' (Lally, 2007).

[6] The quality of adult-child interactions in ECE settings is the most potent source of variation in child outcomes, although the amount of exposure to these settings also plays a role, perhaps especially with regard to social-emotional development (Phillips & Lowenstein, 2011).

[7] This involves building strong links between home and the early childhood setting (David, 2003; Farquhar, 2003) and developing partnerships between parents and early childhood providers (Siraj-Blatchford et al. 2002; Stonehouse, 2001a, 2001b).

BERA Early Years Special Interest Group, 2003; Bertram and Pascal, 2002; Lloyd-Jones, 2002; Mitchell, Wylie and Carr, 2008; OECD, 2006).[8]

- Key structural features of effective early childhood services are the elements that enable a sound early learning environment and include and include:
  - Group size (number of children in a room/group), staff-child ratio, and caregiver qualifications (years of education, child-related training, and years of experience) (CCCH, 2006; Cleveland et al., 2006; Early Childhood Learning Knowledge Centre, 2006) (see section 7 of this document, p. 30).
  - Well-trained staff and ongoing staff development and support (Bennett, 2007; Best Start Expert Panel on Early Learning, 2006; Duffy, 2006; Early Childhood Learning Knowledge Centre, 2006; Elliott, 2006; Melhuish, 2003; OECD, 2001; Sammons, 2010; Saracho and Spodek, 2007; Work and Family Policy Roundtable, 2006).
  - Staff continuity (David, 2003), which is particularly important for very young children (Elliott, 2006).[9]
  - Core early childhood services are provided on a universal rather than a targeted basis (Barnett et al., 2004; Bennett, 2007; CCCH, 2006; Doherty, 2007; OECD, 2001; Press, 2006). An OECD review of early childhood education and care policies in OECD countries (including Australia) (OECD, 2001; Bennett, 2007) suggested that the universal provision of early childhood services is more effective than targeting particular groups, and quality tends to be better.

Economic benefits of investment in ECEC services

- High quality early childhood education and care programs have been shown to lead to significant returns on investment (Barnett, 1993; Schweinhart et al., 2011; London School of Economics, 2007).
- Lee et al. (2012) estimated that, in the long-term, the US will receive a return of $3.60 for each dollar invested in early childhood education. In the short term, program costs exceed cumulative benefits however by the fourteenth year from the initial investment the total benefits exceed the amount of the investment in the program.
- A recent cost-benefit analysis of a preschool program for disadvantaged children in US indicated that the economic return to society was $244,812 ($US, in 2000 dollars) per participant on an initial investment of $15,166 ($US, in 2000 dollars) (Schweinhart et al., 2011). The greatest economic benefits came from crime reduction (Schweinhart et al., 2011).

Inequities in outcomes and services

- Social gradients are evident across a wide range of developmental, health and well-being indicators: inequalities in outcomes are not concentrated exclusively at the bottom of the socioeconomic spectrum in a small group of poor or problematic families, but are distributed across the entire spectrum in a graded fashion (Denburg & Daneman, 2010;

[8] Lloyd-Jones (2002) argues that, for very young children, best practice in early childhood services must match the qualities of good home environments. Similarly, Lally (2007) recommends that effective caregiving should include family practices as part of care.

[9] Although young children certainly can establish healthy relationships with more than one or two adults and learn much from them, prolonged separations from familiar caregivers and repeated 'detaching' and 're-attaching' to people who matter are emotionally distressing and can lead to enduring problems (National Scientific Council on the Developing Child, 2004, 2005).

Marmot, 2006; Strategic Review of Health Inequalities in England post-2010 Committee, 2010; Wilkinson & Pickett, 2009). Outcomes for children and families improve progressively the further up the socioeconomic spectrum they are, and worsen progressively the further down they move (Hertzman et al., 2010; Strategic Review of Health Inequalities in England post-2010 Committee, 2010).[10]

- These social gradients appear to be becoming steeper in Australia: the gap between those in the top socioeconomic level and those at the bottom is growing relatively wider and more entrenched (Leigh, 2013).
- Disparities in child outcomes between children from advantaged and disadvantaged backgrounds are evident at 9 months and grow larger by 24 months of age (Halle et al., 2009; Heckman, 2008; Nicholson et al., 2010). These disparities exist across cognitive, social, behavioural, and health outcomes.
- By the time they get to school, there are marked differences between children in regards to the cognitive, non-cognitive and social skills they need to succeed in the school environment (Cunha et al, 2006; Duncan et al., 2007; Feinstein, 2003; Le et al., 2006; Shonkoff and Phillips, 2000; Stipek, 2001). Children who lag behind their peers at school entry tend to be from low-income families (Brooks-Gunn & Duncan, 1997; Lee & Burkham, 2002; Reardon, 2011). The differences between these children and their more affluent peers at school entry are predictive of later academic and occupational success (Boethel, 2004; Cunha et al., 2006; Dockett and Perry, 2001; Feinstein, 2003; Halle et al., 2009, 2012, 2013; Le et al., 2006; Shonkoff and Phillips, 2000; Stipek, 2001).
- High quality early childhood education and care plays a key role in narrowing the gap between advantaged and disadvantaged children upon school entry by providing children with opportunities to develop critical skills during the years prior to school (Cloney et al, 2013).
- Recent evidence demonstrates that disadvantaged neighbourhoods in Australia tend to have poorer quality ECEC than more advantaged neighbourhoods (Cloney et al, 2013; Robinson, 2014).

Implications

Australian governments have recognised the importance of high quality early childhood education and care services with a number of policy initiatives including: (a) a universal national curriculum for ECEC services (i.e. the Early Years Learning Framework); (b) a national quality framework (i.e. the National Quality Framework); and (c) the COAG National Early Childhood Development Strategy (Council of Australian Governments, 2009).

Although early childhood education and care programs are generally performing well in regards to some areas of quality, there is still room for improvement. This evidence, along with the evidence regarding the benefits of high quality early childhood education and care for children – especially children from disadvantaged backgrounds – and the subsequent social and economic benefits for Australia, provides support for the continued implementation of the National Quality Framework, including the National Quality Standard and the national quality rating and assessment process. The new arrangements have 'raised

[10] As an example of the social gradient, a recent analysis indicated that 4% of Australian children have special health care needs upon entry to school and a further 18% are "of concern" to teachers. Although children with special health care needs were represented across demographic profiles, the proportions were greater amongst children from low socioeconomic status communities (Goldfeld et al, 2012).

the bar' for quality ECEC services in Australia but there is still some way to go before the benefits of this approach can be realised. Ongoing reviews of the National Quality Framework are important to ensure it is being delivered as intended.

The continued implementation of frameworks that ultimately aim to improve the quality of all early childhood education and care programs is especially important considering recent evidence that indicates a social gradient in the quality of ECEC in Australia.

As children from disadvantaged backgrounds especially benefit from high quality education and care and are especially negatively affected by poor quality ECEC, the imperative to ensure all children receive high quality early childhood education – regardless of where they live – is further strengthened. There is a strong argument for an approach that emphasises progressive universalism – that is an approach that provides access for all children to high quality programs with additional investment to ensure those most in need are enabled to participate.

3.3 The importance of intervening early

Evidence

- As noted, child development and family functioning can be compromised by a range of factors, both internal and external, including childhood behavioural problems and child abuse and neglect. Intervening during the early years, when children and their families are experiencing stress and adversity, has a range of social and economic benefits (Moore & McDonald, 2013).
- Universal high quality ECEC services can play a role in identifying problems for children and families before they become chronic and entrenched. Universal services, including ECEC, can also provide non-stigmatising pathways into appropriate services which are especially important for vulnerable families (Cortis et al., 2009).[11]
- The younger the age group receiving support through targeted programs, the higher the rate of return, with the highest rate of return from interventions that occur during the prenatal and 0-3 age period (Doyle, 2009; Heckman, 2008).
- The cost of doing nothing to ameliorate problems during childhood is considerable, with the costs of later interventions escalating rapidly (Access Economics, 2009; Allen, 2011; Powell, 2010). For example, a recent analysis estimated that untreated behavioural problems in childhood costs the UK government an average of £70,000 by the time an individual reaches 28 years of age – ten times the cost of children without behavioural problems (Allen, 2011).

Implications

The evidence regarding the cost of not intervening when children – or their families – are experiencing difficulties during the early years provides strong support for the role of governments in early intervention. Early intervention can take a number of different forms including home visiting, health services and parenting programs.

The evidence regarding the powerful impact of chronic stress and cumulative adverse experiences on children's neurological and biological development – and the subsequent impacts of those experiences upon children's long-term outcomes – provides strong support for governments playing a role in decreasing these risk factors and increasing protective factors for children.

[11] Non-stigmatising pathways of support and non-stigmatising services are important as many families are sensitive to concepts of 'charity' and 'welfare' (Cortis et al, 2009).

The evidence regarding the protective role that high quality early childhood education and care can play in reducing the negative impacts of chronic stress and adverse experiences on children, provides further support to the continued role of government in improving and maintaining the quality of ECEC programs.

4. Desirable outcomes of early childhood education and care

Key messages

- The most desirable outcome of early childhood education and care is to provide children with the functional skills or capabilities they need to participate meaningfully in their daily environments. This outcome aligns well with the core outcomes of the national Early Years Learning Framework
- In regards to outcomes for children, a priority for the next decade is to provide continuing support for the implementation of the Early Years Learning Framework to ensure that all ECEC services are able to support all young children to achieve this outcome
- Timely support for families – provided either directly or indirectly – is a desirable (and achievable) outcome of early childhood education and care. Support for families is important to ensuring optimal home learning environments for children during the early years
- In regards to outcomes for families, priorities for the next decade are: to expand the capacity of ECEC services to provide family-friendly environments and programs to address family needs and promote parenting skills; and to improve the ability of ECEC services to detect emerging child and family problems through the systematic use of surveillance and screening tools (Moore & McDonald, 2013).
- An integrated early childhood service system is a desirable outcome for all services that work with young children and their families, including ECEC services. Such systems should be place-based, should use whole-of-community or 'collective impact' approaches and should involve co-design and co-production approaches
- In regards to outcomes for the service system, priorites for the next decade include: to build a tiered system of services based on universal provision; and improve the interface between communities and services

The Productivity Commission has expressed an interest in what might be desirable outcomes of ECEC and which could be made achievable over the next decade (p. 6).

In the following sections we assess the evidence and, based upon that assessment, highlight three critical outcomes for early childhood education and care: for children, for families and for the early childhood service system (which includes ECEC services). We describe what might be achievable, in regards to these outcomes, over the next decade.

Overall, as described in section 2 (above), the evidence indicates that ECEC makes a positive social and economic contribution to Australian society. Although debates regarding ECEC often focus on parental workforce participation, the potential benefits of ECEC go well beyond that. In the same way that schools are viewed first and foremost as institutions that benefit children and communities (rather than enablers of workforce participation), the weight of evidence regarding ECEC indicates that it should be seen as having the primary function of supporting children's development and enabling family friendly, inclusive society.

4.1 Outcomes for children

Evidence

- Outcomes for children are increasingly being framed in terms of capabilities, functional skills, and participation (Sen, 1985, 2005; Nussbaum, 2000, 2011; Zubrick et al., 2009).
- Regarding capabilities and skills, superior developmental outcomes are thought to occur when individuals have a number of specific abilities (e.g. the ability to regulate emotions, the ability to communicate effectively) and possess certain skills or qualities (e.g. a degree of introspection) (Zubrick et al., 2005). The overarching outcome developing these abilities and skills is the capability to participate – economically, socially and civically (Zubrick et al., 2009). This allows people to choose lives that they value.
- Participation is regarded as being important in two ways: as a major contributor to quality of life (Rosenbaum, 2008) and as a major driver of development (Law et al., 2006). This is particularly so for children and young people who are at risk of exclusion, such as children with disabilities (King et al., 2002).
- Building on these ideas, it is proposed that the overall outcome we want for all children is that they gain the functional skills or capabilities they need to participate meaningfully in their daily environments (Moore, 2012).

Implications

The evidence indicates that the most desirable outcome of early childhood education and care is to provide children with the functional skills or capabilities they need to participate meaningfully in their daily environments.

Ensuring the capacity of individuals to participate in economic, social and civic life by ensuring they have the opportunity to develop the aforementioned capabilities will help Australia fulfil valuable social and economic goals such as a reduction in long-term unemployment and the promotion of social engagement.

This outcome aligns well with the core outcomes of the national Early Years Learning Framework (EYLF) which are *Being, Becoming* and *Belonging* (Council of Australian Governments, 2009) and is consistent with the 'whole child' approaches recommended in both the 2008 Melbourne Declaration on Educational Goals for Young Australians (Ministerial Council on Education Employment Training and Youth Affairs, 2008) and the Council of Australian Governments' strategy document on child development, *Investing in the Early Years* (Council of Australian Governments, 2009).

The priorities for the next decade should be

- Provide continuing support for the implementation of the Early Years Learning Framework to ensure that all ECEC services are able to support all young children in *being*, *becoming* and *belonging*, giving them the functional social, emotional and cognitive skills to participate meaningfully in all the activities of the programs.

4.2 Outcomes for families

Evidence

- Although ECEC experiences have both short- and long-term impacts on a wide range of developmental outcomes, parents are the most important influence on children's

development (Phillips & Lowenstein, 2011). Early home learning environments have long-term positive impacts on cognitive and social development (Melhuish, 2010a).

- The needs of children cannot be separated from the needs of their families because children – especially young children – are profoundly influenced by their families and the family environment (Feinstein & Bynner, 2004; Lewis, 1997, 2005; Lewis & Mayes, 2012; Macmillan et al., 2004; van IJzendoorn & Juffer, 2006).
- The social and physical environments that families experience have significant effects upon family functioning, which can in turn compromise their child rearing and their children's development (Bowes, 2004; Hertzman, 2010; Luster & Okagaki, 2005).
- The conditions under which families are raising children have changed (Hayes et al., 2010; Li et al., 2008; Moore, 2008; Moore & Skinner, 2010; Richardson & Prior, 2005; Trask, 2010). Families who are relatively well-resourced are better able to meet the challenges posed by altered social conditions, but poorly-resourced families can find the heightened demands of contemporary living and parenting overwhelming (Barnes et al., 2006a, 2006b; Gallo & Matthews, 2003; Moore & McDonald, 2013).
- Gaps in family functioning are cumulative: the more advantaged families are initially, the better they are able to capitalise and build on the enhanced opportunities available, so that the gap between them and those unable to do so progressively widens (Rigney, 2010; Social Exclusion Task Force, 2007).
- When families are struggling they need to receive the right support in a timely manner: the existing service systems are unable to respond promptly to the emerging needs of all parents and communities because of the lack of effective ways of identifying and responding to such needs (Moore & McDonald, 2013).

Implications

Traditionally, ECEC services have been conceptualised and run as services for children only, with little or no involvement of, or services for, parents. While this model may work reasonably well for those children whose home environments are appropriately nurturing and stimulating, it does not work well enough for those who come from homes that are less able to provide such care.

Children's development is a product of *all* their learning environments, and the benefits to be gained from high quality early childhood programs can be steadily undermined if the home environment continues to be chaotic or neglectful or unstimulating. Although ECEC programs can compensate for poor home environments (Sylva, 2010), the evidence suggests that this is not enough to ensure positive outcomes for all children.

The evidence indicates that timely support for families – either directly or indirectly provided – is a desirable (and achievable) outcome of early childhood education and care. This outcome is desirable because it helps to ensure optimal outcomes for children. As noted in section 2 (above), ensuring better outcomes for children – especially children from disadvantaged backgrounds – has significant social and economic benefits for Australia as a whole.

The priorities for the next decade should be:

- Expand the capacity of ECEC services to provide family-friendly environments and programs to address family needs and promote parenting skills.
- Promote the ability of ECEC services to improve the detection of emerging child and family problems through more systematic use of surveillance and screening tools

(Moore & McDonald, 2013). This will involve supporting trials of appropriate tools as well as training in the use of these tools.

4.3 Service system outcomes

Evidence

- Many of the problems faced by Australian children and families are complex or 'wicked' problems, with multiple, interconnected causes and beyond the capacity of any one organisation to effectively respond to (Head & Alford, 2008; Moore & Fry, 2011; Moore & McDonald, 2013).
- The early childhood service system as a whole is largely not operating in an integrated way and, as a result, families often do not receive cohesive support (CCCH, 2006; Moore, 2008; Wear, 2007). The result of a poorly integrated service system is service system inefficiency, and, for families, difficulties navigating the system and getting the support they need: often those families who are most in need of support are the least likely to receive it (Fram, 2003; Ghate & Hazel, 2002).
- Integration at the service level and within local communities is a positive first step towards improving outcomes for families; however, in the longer-term, and at a higher level, what is required is an integrated early childhood system (CCCH, 2009). Such systems should be *place-based* (Moore & Fry, 2011; Moore & McDonald, 2013; Wiseman, 2006); should use *whole-of-community or 'collective impact' approaches* (Bridgespan Group, 2011; Jolin et al., 2012; Kania & Kramer, 2011; Moore & McDonald, 2013); and should involve *co-design and co-production approaches*, engaging families and communities in planning and implementing services to meet their local needs (Boxelaar et al., 2006; Boyle et al., 2010; Hopkins & Meredyth, 2008; McShane, 2010; Moore & McDonald, 2013).

Implications

ECEC services need to be an integral part of a wider service system that is capable of addressing any additional needs of challenges that young children and their families face. Just as children's development is a product of the all their learning environments, family functioning is shaped by all the community, social and economic environments they experience. These environmental factors can either promote the family's capacity to care for their children as they (and we) would wish, or they can undermine their efforts. There are many ways in which parental and family functioning can be compromised, and it is important that these be addressed as promptly and effectively as possible. ECEC services can play a part in this process by being active members of an integrated system of child and family support services.

In regards to priorities for the next decade, a recent analysis of these issues concluded that there needs to be major changes in the way that child and family services were delivered (Moore and McDonald, 2013). The most important changes are as follows:

- *Build a tiered system of services based on universal provision*: known as progressive or proportionate universalism (Boivin & Hertzman, 2012; Human Early Learning Partnership, 2011; Strategic Review of Health Inequalities in England post-2010 Committee, 2010), this approach is based on the recognition that child vulnerability exists in every socio-economic strata of our society.
- *Create a better co-ordinated and more effective service system*: the service system needs to become better integrated so as to be able to meet the multiple needs of families in a more seamless way.

- *Improve the interface between communities and services* by providing staff with training in family engagement and relationship-building skills; employing community links workers to build relationships with marginalised and vulnerable families; and creating opportunities for parents to be actively involved in the planning, delivery and evaluation of the services and facilities they use.
- *Improve the detection of emerging child and family problems through more systematic use of surveillance and screening tools:* Two Australian tools for learning about parental concerns about family functioning are in the process of development.[12]
- *Engage families and communities in planning and implementing services to meet their local needs*: The value of involving parents in the actual delivery of services has been demonstrated in the Empowering Parents, Empowering Communities (EPEC) program developed in the UK (Day et al., 2012).[13]

Other priorities include:

- Changes to the role descriptions and time allocations for ECEC workers (particularly program managers) to enable ECEC services to be part of an integrated place-based service system and
- Support for trials of place-based and collective impact initiatives involving ECEC services.

[12] The tools are the Common Approach to Assessment, Referral and Support (CAARS) being developed by Australian Research Alliance for children and Youth (ARACY, 2013), and the Parent Engagement Resource (PER) currently being trialled by the Centre for Community Child Health (Moore et al., 2012b).

[13] The Empowering Parents, Empowering Communities (EPEC) program aims to increase community access to effective parenting support through a peer-led group intervention, and involves the training of local parents as group leaders. Initial results have found that the program is very acceptable to parents, and appears to be effective in reducing problem child behaviour, increasing positive parenting and engaging parents (Day et al., 2012).

5. Types of families requiring ECEC in the future

Key messages

- Disadvantaged families are more likely to face barriers accessing and remaining engaged with early childhood education and care services
- The introduction of universal access to preschool for children in the year prior to school will go some way towards improving utilisation of ECEC services by disadvantaged families however some families face additional barriers

The Productivity Commission has expressed an interest in what types of families are likely to require significantly more or less use of ECEC in the future (p. 11).

In the following sections, rather than focus on which families might require more ECEC in the future, we focus specifically on what types of families are likely to *face barriers* in accessing and utilising ECEC services. In other words, providing ECEC services to families who require those services is important. So too, however, is ensuring that the families of all young children are able to access and utilise those services.

Evidence

- Early childhood education and care services in Australia are under-utilised by disadvantaged families (Baxter & Hand, 2013), yet children from these families have the most to gain from attending high quality ECEC programs (Apps et al., 2012; Cunha et al., 2006; Elliott, 2006; Harrison, 2008; Magnuson et al., 2007; Magnuson & Waldfogel, 2005; Melhuish et al., 2006; Peisner-Feinberg & Yazejian, 2010; Phillips & Lowenstein, 2011; Sammons, 2010; Sylva et al., 2004; Sylva, 2010; Votruba-Drzal et al., 2013).
- Disadvantaged families face significant barriers accessing and remaining engaged with early childhood services, including ECEC (Carbone et al, 2004; CCCH, 2010).
- In order that these barriers are overcome and vulnerable families are accessing ECEC services and remaining engaged with them over time (i.e. not “dropping out”), a number of primary characteristics are essential for early childhood services (Barnes, 2003).
- Going to where families are, rather than waiting for families to approach services, is an especially effective means of engaging families in services (Cortis et al, 2007; McDonald, 2011).
- One response to limited access and utilisation of services is a targeted approach (i.e. providing services to a specific group of people, rather than universal provision). However, in universal systems, coverage is greater for all children (including for targeted groups) and quality tends to be of better quality (OECD, 2001; Bennett, 2007).
- A universal approach available to children from all income levels, as opposed to a program targeted at a subgroup of the population, would maximize economic returns (Morrissey & Warner, 2007). However, particular attention should be given to children in need of special support, or from ethnic or low-income backgrounds. Targeting is therefore appropriate as a secondary strategy. A progressive approach to funding that ensures cost is not a barrier for low income families to high quality services is necessary to ensure access.

- Attendance and use of services by marginalised families can be increased by actively involving families in the planning, design, delivery and evaluation of services.

Implications

The evidence indicates that families from disadvantaged backgrounds face multiple barriers accessing early childhood services, including early childhood education and care. The introduction of universal access to preschool for children in the year prior to school is an important step towards ensuring improved access for all young children to ECEC services.[14]

The evidence also indicates, however, that barriers to accessing ECEC can be complex. Universal access to preschool in and of itself may not sufficient for ensuring all young children have the opportunity to participate in preschool. For example, some families are reluctant to use ECEC services because of a lack of trust in services. These families require additional encouragement and support to utilise ECEC services. This could take the form of outreach services to find and engage those families not making use of preschool and other ECEC and family support programs.

[14] It is important to note that charging a fee for ECEC services and programs – however small – is appreciated by some families and can be beneficial for them (Brennan, 2013).

6. The effect of different types of ECEC

Key messages

- Children's development does not depend upon ongoing exclusive care from their biological parents. What matters most is that children receive responsive caregiving from a small number of consistently available caregivers
- In general the evidence indicates that ECEC programs (not including preschool) sometimes pose risks to young children, and sometimes confer benefits, but their impacts are best understood in conjunction with other factors such as family resources and the quality of parental care
- In regards to preschool, the longer the duration of attendance beyond the age of 3 years, the greater the benefits, particularly for children from disadvantaged backgrounds. Children who attend preschool full-time do not have better (or worse) outcomes than children who attend preschool part-time
- Corporate for-profit ECEC services can have competing obligations that impact negatively on the quality of the service provided, thereby highlighting the importance of the government's role in overseeing the implementation of universal quality standards for ECEC

The Productivity Commission has expressed an interest in information regarding the effect of different types of ECEC on children's learning and development and preparedness for school as well as how the amount of time a child spends in ECEC impacts on their learning and development outcomes (p. 12).

We begin with the all-important question of the relative importance of early care provided by biological parents and that provided by others. Other issues considered are the evidence regarding the timing and duration of ECEC programs (with preschool considered separately), and the relative effectiveness of not-for-profit and for-profit ECEC services.

6.1 ECEC and parental care

Evidence

- Although biological parents and their infants are 'hard-wired' to bond to each other, children's development does not depend upon ongoing exclusive care from their biological parents: what matters most for positive development in early childhood is that children receive responsive caregiving from a small number of consistently available caregivers, rather than exclusive care from the biological parents (Bensel, 2009; Hrdy, 2009; Meehan, 2014).
- Parents are the most important influence on children's development, and the impact of ECEC experiences are best understood in interaction with family effects: whether variations in the timing and quantity of child care have beneficial or adverse effects on children's development depends upon the nature of their family relationships and other family variables (Babchishin et al., 2013; Phillips & Lowenstein, 2011).

Implications

Although relationships between young children and their primary caregivers remains of paramount importance, being cared for by others, whether other family members or formal ECEC services, does not put the child's development at risk. The key proviso is that the care

provided by others must be responsive to the children's needs and interests, and provided by a small number of consistently available caregivers.

This proviso has implications for the quality of the care provided. It suggests that a major focus of efforts to promote quality in ECEC services should be on the nature of the relationships between carers and children. It also suggests that rostering of staff in child care centres should be based upon maintaining continuity of care for individual children rather than on logistical or other factors.

6.2 Timing and duration of attendance in ECEC programs

Evidence

- The evidence regarding the effects on child development of different amounts and timing of early child care is complex and difficult to interpret (Wasik et al., 2013). Different arrangements appear to have different effects on children's cognitive and language development compared with their behavioural development.
- Some studies have found that, in some circumstances, children in early child care manifest more behavioural problems. Australian studies (Harrison, 2008; Ungerer et al., 2006) suggest that longer hours of child care have both positive and negative effects for children's socio-emotional development at age 2 to 3 years— children show higher levels of social competence but also more behaviour problems.
- In countries with less well regulated child care systems (e.g. the US), starting child care early in life and spending long hours in care are associated with higher rates of behavioural problems, although these effects are typically modest (Belsky et al., 2007; Bradley & Vandell, 2007; Coley et al., 2013; Fram et al., 2012; Vandell et al., 2010). These effects are exacerbated when the quality of care is poor, and group sizes large (McCartney et al., 2010).
- The quality of child care is a critical factor. In countries that have better regulated child care systems (eg. Australia, Norway), negative behavioural outcomes are not so evident (Harrison, 2008; Lekhal, 2012; Zachrisson et al., 2013). Canadian data indicates that properly regulated early child care environments can have lasting positive effects on behaviour (Babchishin et al., 2013).
- Australian studies show that part-time child care for 2-3 year olds can have small but positive effects on the children's social and emotional development, although full-time care is associated with worse behavioural outcomes, an effect that is reduced in centres with lower child-carer ratios (Yamauchi & Leigh, 2011).
- The evidence regarding the impact of different forms and timing of child care on children's cognitive and language development is also mixed, with some studies showing positive benefits (eg. Vandell et al., 2010), while others find negative outcomes (eg. Bernal & Keane, 2011).
- Australian data (Lee, 2014) indicates that children's non-parental child care experiences from birth through 3 years do not have adverse impacts on their cognitive outcomes at age 4–5. However, children who spend longer hours in non-parental child care (eg. more

than 25 hours per week), and those who enter at 18 months or older, have lower cognitive test scores at ages 4–5 (Lee, 2014).

- Under some circumstances, multiple care provision can lead to increases in children's problems behaviours (de Schipper et al., 2004; Morrisey, 2009). Many children have multiple care providers: nearly one quarter of Australian children under 5 years are cared for by a number of different carers (Claessens & Chen, 2013). The impact of such arrangements on children depends, in part, upon the child's prior experiences of child care: children who are accustomed to having multiple carers do not exhibit the same level of problem behaviours as those moving from parental or single non-parental care to multiple caring arrangements (Claessens & Chen, 2013).
- Another factor that has been shown to have an impact on children's cognitive and language development is the stability of the child care arrangements, with greater instability being associated with poorer outcomes (Tran & Weinraub, 2006).
- The evidence regarding age of entry into child care is mixed. However, there is some Australian evidence that found that children who begin non-parental child care at a later age may have poorer outcomes than those who began earlier (Sanson et al., 2011). Other studies show that attendance at high quality care in the early years can have long term benefits (Vandell, et al., 2010). However, another review of the evidence concluded that children who begin care early in life and are in care 30 or more hours a week are at increased risk for stress-related behavioural problems (Bradley & Vandell, 2007).
- The evidence regarding the hours children spend in child care is also mixed: some studies find that long hours in child care have negative effects (eg. Bowes et al., 2009; Coley et al., 2013; Lee, 2014; McCartney et al., 2010), while others find that children benefit from such experiences (eg. Loeb et al., 2007). There is no evidence to show what number of hours of child care is optimal for children of different ages (Lee, 2014).
- The evidence regarding the benefits and timing of preschool education programs is more clear cut than for early child care programs. The longer children spend in preschool education programs beyond the age of 3 years, the greater the benefits, particularly for children from disadvantaged backgrounds (Sammons, 2010). The combination of high quality preschool and longer duration of attendance has the greatest positive impact on development (Sammons, 2010).
- Australian data (Goldfeld et al., submitted) shows that attendance at preschool is associated with better outcomes across all five of the AEDI domains at school entry, whereas other forms of child care (attendance at day care centres that did not include a preschool program, informal non-parental care, or receiving parental care only) are all associated with equal or poorer outcomes across the five domains. These effects appeared to be worse for children living in socioeconomically disadvantaged communities.
- There is no evidence that full-time attendance in preschool education programs leads to better outcomes than part-time attendance (but there is also no evidence that children are disadvantaged in any way by full time attendance) (Melhuish, 2003, 2010b; Sammons, 2010).

Implications

Overall, these findings suggest that ECEC programs (not including preschool) sometimes pose risks to young children, and sometimes they confer benefits, but their impacts are best

understood in conjunction with other factors—notably family resources and the quality of parental care—on early development (Phillips & Lowenstein, 2011). Early child care can have positive benefits for children provided that the quality of the care provided is high, the hours spent in child care are moderate, and the child care arrangements are stable.

In regards to preschool, the longer the duration of attendance beyond the age of 3 years, the greater the benefits, particularly for children from disadvantaged backgrounds. However, attending preschool full-time does not lead to better outcomes for children when compared to part-time attendance.

6.3 Not-for-profit and for-profit ECEC

Evidence

- Although there is variability in private-for-profit ECEC services, an analysis of international evidence found that they 'tend to offer the lowest quality services in all countries where they have been investigated' (Penn, 2009).
- Indicators of quality, (such as staff stability; staff:child ratios; and staff qualifications) are less evident in for-profit services (Sosinsky, Lord, & Zigler, 2007).
- An Australian study (Rush & Downie, 2006) found that the quality of independent for-profit ECEC services is comparable to that of not-for-profit services, and it is the *corporatised* for-profit services that have lower quality.
- A number of researchers have reported on the tension that exists between corporate for-profit service provision and the principles of high quality ECEC, including obligations to shareholders that compete with obligations and responsibilities to children (Rush, 2006; Brennan, 2007).
- Approaches to reducing costs used in corporate organisations appear to be predominantly in the areas of high expense that are also indicators of quality (e.g. staff qualifications; staff:child ratios; and professional development) (Rush & Downie, 2006).
- Studies of parental experiences of trying to access child care services in regional Australia (Harris, 2008; Harris & Tinning, 2012) support the finding that corporate services are poor providers of quality childcare options.
- For-profit services have lower levels of enrolments of children with additional needs, from culturally and linguistically diverse backgrounds, and from marginalised groups (Pocock & Hill, 2007), resulting in a risk of inequity in service provision towards these families (Bennett, 2008).
- There is a potential for profit-driven services to provide less expensive services, such as those for children over 3 years and children who do not require specialist equipment or assistance (Brennan, 2007; Pocock & Hill, 2007).

Implications

The competing obligations of corporate for-profit ECEC services – and the impact these competing obligations can have on the quality of the ECEC service provided – highlights the importance of the government's role in overseeing the implementation of universal quality standards for ECEC (see also section 3).

Universal quality standards (including standards regarding inclusion) will help to ensure that (a) families in regional and remote areas receive as higher quality care as families in urban areas and (b) that all children have access to high quality ECEC, regardless of whether or not they have additional needs.

7. ECEC services for young children with disabilities and developmental delays

Key messages

- There are significant gaps between the ECEC opportunities for children with additional needs and those of other children
- There has been little change in inclusion of children with disabilities in ECEC services and little debate regarding how this can be achieved
- All early childhood settings, with the necessary supports and resources, can enhance the learning, development and participation of children with developmental disabilities.
- In order for this to occur: ECEC services need to strengthen their capacity to provide individualised programs for all children; and the specialist early childhood intervention services need to increase the support they provide to ECEC services in meeting the needs of individual children with developmental disabilities.

The Productivity Commission has expressed an interest in information regarding:

a) how well the needs of disadvantaged, vulnerable or other additional needs children and being met by the ECEC sector as a whole, by individual types of care and in particular regions;

b) the extent to which additional needs are being met by mainstream ECEC services or specialised services;

c) key factors that explain any failure to meet those needs; and

d) what childcare operators and governments can do to improve the delivery of childcare services to children with additional needs (p. 19).

In sections 3 and 5 (above), we focus on issues relating to disadvantaged and vulnerable children therefore in this section we will focus on children with disabilities and developmental delays, with a specific focus upon points (b), (c) and (d) above.

We begin this section with background information about early childhood services and children with disabilities and developmental delays. We go on to cite relevant evidence and discuss the implications of this evidence for the key questions of interest.

Background

- The two key national frameworks that are currently shaping early childhood services – the *Early Years Learning Framework* (Council of Australian Governments, 2009) and the *National Quality Standard* (Australian Children's Education and Care Quality Authority, 2011) – are both meant to apply to all children. In other words, all ECEC services should be designed so as to cater for the full diversity of children, including those with developmental disabilities.
- Fundamental to the Early Years Learning Framework is a view of children's lives as characterised by *belonging*, *being* and *becoming* – emphasising the importance of the relationships that shape children's sense of belonging, and of the importance of learning to participate fully and actively in society. Principles include equity, inclusion and diversity also underpin the National Quality Framework.

- The full implications of these frameworks as they apply to children with developmental disabilities have yet to be realised. While resources have been developed to support the implementation of the frameworks throughout the ECEC service system, there has been no real change in the levels of inclusion, nor much debate about how this can best be achieved.
- The one exception to this been the preparation of a joint position statement on the inclusion of children with a disability in ECEC services by two peak bodies - Early Childhood Australia (representing the general ECEC sector) and Early Childhood Intervention Australia (representing early childhood intervention services for children with developmental disabilities (Early Childhood Australia and Early Childhood Intervention Australia, 2012). This statement focuses on inclusion of children with a developmental disability in early childhood education and care settings:

  > "Our position is that children with a disability have the same rights as all children and additional rights because of their disability. They share with all children the right to be valued as individuals and as contributing members of families, communities and society.
  >
  > Every child is entitled to access and participate in ECEC programs which recognise them as active agents in their own lives and learning, respond to them as individuals, respect their families as partners and engage with their diverse backgrounds and cultures.
  >
  > This means that ECEC services and support professionals must be resourced and supported to the level required to fully include children with a disability and to achieve high quality outcomes for all children."

- Although this Position Statement notes the importance of specialist support and resources for ECEC staff, this is not consistently available.
- Further efforts to build on this initiative are being made (see the *Reimagining Inclusion* website - http://reimaginginclusion.org.au/), but there has been no endorsement or support from government so far.

Evidence

- Children with additional needs represent a significant minority of the child population. A recent analysis of population-level data from the Australian Early Development Index, a teacher-rated checklist administered soon after school commencement, found that 4% of children were reported as having established special health care needs (including developmental disabilities), and a further 18% were identified by teachers as 'of concern' (Goldfeld et al., 2012). These children showed higher rates of vulnerability across all domains of development.
- These children do not always receive the help they need. A recent review of the Early Childhood Development workforce by the Productivity Commission (2011) has noted that early childhood development services are not currently providing the same start in life to children with additional needs that is commonly available to other children, and there are significant gaps between the ECEC opportunities for children with additional needs and those of other children. The Productivity Commission urged that the workforce requirements to provide appropriate services for these children must be prioritised so that the gap in outcomes between them and other children is minimised, not exacerbated.

- Recent reviews of early childhood intervention services for young children with disabilities (Dunst, 2012; Moore, 2012; Working Group on Principles and Practices in Natural Environments, 2008a, 2008b) have identified inclusion in mainstream early childhood services as an essential form of intervention. The learning and development of children with developmental disabilities is optimised when they have the same opportunities as other children to interact with a range of adults and caregivers, and with other children without developmental disabilities. In addition to accessing ECEC services, children with developmental disabilities need specific help in developing the functional skills they need to participate meaningfully in these environments (National Professional Development Centre on Inclusion, 2009).

Implications

In regards to the extent to which additional needs are being met by mainstream ECEC services or specialised services; there are significant gaps between the ECEC opportunities for children with additional needs and those of other children. Although the key national early childhood services frameworks emphasise the importance of principles such as inclusion, there appears to have been little change in inclusion of children with disabilities in ECEC services and little debate regarding how this can be achieved.

In regards to the factors that explain ECEC services failure to meet the needs of children with disabilities, it is clear that all early childhood settings, with the necessary supports and resources, can enhance the learning, development and participation of children with developmental disabilities. In order to improve the delivery of childcare services to children with additional needs, two major developments are needed. First, ECEC services need to strengthen their capacity to provide individualised programs for all children, including being able to provide progressive levels of support for children with additional needs (Buysse & Wesley, 2010). Second, the specialist early childhood intervention services need to increase the support they provide to ECEC services in meeting the needs of individual children with developmental disabilities.

8. Staff ratios, qualifications and outcomes for children

Key messages

- Lower staff-to-child ratios and higher staff qualifications are associated with better outcomes for children in early childhood education and care. However, the relationship between these factors and child outcomes are complex
- Improving staff-to-child ratios and staff qualifications is likely to have a positive impact on outcomes for children, however improvements are unlikely to be immediate and will be dependent upon process factors and issues such as leadership and management

The Productivity Commission has expressed an interest in information regarding the effect of increased staff ratios and qualification requirements on outcomes for children (p. 25).

In the following sections we review evidence relevant to this question and describe the implications of this evidence for the role of different levels of government.

Evidence

- Preschool education programs only have positive benefits when the preschool teacher has a diploma or degree in early childhood education or child care, rather than only having a certificate level qualification in child care or early childhood teaching or had no relevant childcare qualification (Department of Education and Early Childhood Development and the Melbourne Institute of Applied Economic and Social Research, 2013).
- There is a strong association between the ability of staff to create a sound early learning environment and the key structural features of group size (number of children in a class), staff-child ratio, and caregiver qualifications (years of education, child-related training, and years of experience) (CCCH, 2006; Cleveland et al., 2006; Early Childhood Learning Knowledge Centre, 2006).
- Smaller group sizes and favourable staff-child ratios allow each child to receive individual attention and foster strong relationships with caregivers (Early Childhood Learning Knowledge Centre, 2006; Graves, 2006; Melhuish, 2003; Work and Family Policy Roundtable, 2006).
- Lower staff-to-child ratios and higher staff qualifications are associated with better outcomes for children in early childhood education and care. However, the relationship between these factors and child outcomes are complex (Cloney et al, 2013).
- It is the relationship between three factors that appears to influence the quality of early childhood education and care:
  - structural factors (e.g. staff-to-child ratios and staff qualifications);
  - process factors (e.g. adult-child interactions, activities available to children); and
  - other factors (e.g. the conduct of leadership and management) (Cloney et al, 2013).
- Improving structural factors will not necessarily lead to immediate positive outcomes for children (see, for example, Early et al., 2007, Kelley & Camilli, 2007, Blau, 2007).

Implications

The evidence indicates that improving structural factors in ECEC, including staff-to-child ratios and staff qualifications, is likely to have a positive impact on outcomes for children, however improvements are unlikely to be immediate and will be dependent upon process factors and issues such as leadership and management.

Appendix A: References

Allen, G. (2011). Early Intervention: The Next Steps. Retrieved from: www.dwp.gov.uk/docs/early-intervention-next-steps.pdf.

Anda R. F., Felitti V. J., Bremner J. D., Walker J. D., Whitfield C., Perry B. D., Dube S. R., & Giles W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. A convergence of evidence from neurobiology and epidemiology. European Archives of Psychiatry and Clinical Neuroscience, 256 (3), 174-186.

Apps, P.F., Mendolia, S., and Walker, I. (2012). The Impact of Pre-School on Adolescents' Outcomes: Evidence from a Recent English Cohort. IZA Discussion Paper No. 6971. Bonn, Germany: Institute for the Study of Labor (IZA).

ARACY (Australian Research Alliance for Children and Youth). (2013). The Common Approach to Assessment, Referral and Support: Working together to prevent child abuse and neglect – Final report. Braddon, ACT: Australian Research Alliance for Children and Youth. Retrieved from: http://www.aracy.org.au/documents/item/127

Babchishin, L.K., Weegar, K. & Romano, E. (2013). Early child care effects on later behavioural outcomes using a Canadian nation-wide sample. Journal of Educational and Developmental Psychology, 3 (2), 15-29. doi:10.5539/jedp.v3n2p15

Banks, G. (2010). Advancing Australia's 'Human Capital Agenda. Ian Little Memorial Address, 13th April, Melbourne. Retrieved from: http://www.pc.gov.au/speeches/gary-banks/advancing-human-capital

Barnes, J. (2003). Interventions addressing infant mental health problems. Children & Society, 17 (5), 386-395.

Barnes, J., Katz, I., Korbin, J.E. & O'Brien, M. (2006a). Children and Families in Communities: Theory, Research, Policy and Practice. Chichester, East Sussex: John Wiley and Sons.

Barnes, J., MacPherson, K., & Senior, R. (2006b). Factors influencing the acceptance of volunteer home-visiting support offered to families with new babies. Child & Family Social Work, 11 (2), 107-117.

Barnett, W. S. (1993). Benefit-cost analysis of preschool education: Findings from a 25-year follow-up. American Journal of Orthopsychiatry, 63 (4), 500-508.

Barnett, W.S., Brown, K. and Shore, R. (2004). The Universal vs. Targeted Debate: Should the United States Have Preschool for All?. NIEER Policy Brief (Issue 6, April 2004). New Brunswick, New Jersey: National Institute for Early Education Research, Rutgers University.

Belsky, J., Vandell, D., Burchinal, M., Clarke-Stewart, K. A., McCartney, K., Owen, M., et al. (2007). Are there long-term effects of early child care? Child Development, 78, 681–701

Bennett, C., Macdonald, G. M., Dennis, J., Coren, E., Patterson, J., Astin, M., & Abbott, J. (2007). Home-based support for disadvantaged adult mothers. Cochrane Database of Systematic Reviews(3), CD003759.

Bensel, J. (2009). Separation stress in early childhood: Harmless side effect of modern care-giving practices or risk factor for development? In G. Bentley and R. Mace (Eds.)(2009). Substitute Parents: Biological and Social Perspectives on Alloparenting in Human Societies. New York: Berghahn Books.

BERA Early Years Special Interest Group (2003). Early Years Research: Pedagogy, Curriculum and Adult Roles, Training and Professionalism. Macclesfield, Cheshire: British Educational Research Association.

Bernal, R. & Keane, M. (2011). Child care choices and children's cognitive achievement: the case of single mothers. Journal of Labor Economics, 29 (3), 459–512.

Bertram, T., & Pascal, C. (2002). Early Years Education: An International Perspective. London, UK: Qualifications & Curriculum Authority.

Best Start Expert Panel on Early Learning (2006). Early learning for every child today: A framework for Ontario early childhood settings. Toronto, Ontario: Ministry of Children and Youth Services. https://ospace.scholarsportal.info/bitstream/1873/8768/1/274085.pdf

Best Start Expert Panel on Early Learning (2006). Early learning for every child today: A framework for Ontario early childhood settings. Toronto, Ontario: Ministry of Children and Youth Services. https://ospace.scholarsportal.info/bitstream/1873/8768/1/274085.pdf

Blau, D. M. (2007). Unintended consequences of child care regulations. Labour Economics, 14(3), 513-53.

Boethel, M. (2004). Readiness: School, family, and community connections. Austin, Texas: Southwest Educational Development Laboratory.

Boivin, M., & Hertzman, C. (Eds.). (2012). Early Childhood Development: Adverse experiences and developmental health. Royal Society of Canada-Canadian Academy of Health Sciences Expert Panel (with Barr, R. G., Boyce, W. T., Fleming, A., MacMillan, H., Odgers, C., Sokolowski, M. B. and Trocmé, N.). Ottowa, Ontario: Canadian Academy of Health Sciences and the Royal Society of Canada. Retrieved from: http://www.newcahswebsite.com/wp-content/uploads/2012/11/ECD-Report-nov-15-2012.pdf.

Bowes, J., Harrison, L., Taylor, A., Sweller, N. and Neilsen-Hewett, C. (2009). Child care influences on children's adjustment and achievement in the first year of school. Paper presented at Australian Social Policy Research Conference, University of New South Wales, July 2009.

Boxelaar, L., Paine, M., & Beilin, R. (2006). Community engagement and public administration: Of silos, overlays and technologies of government. Australian Journal of Public Administration, 65 (1), 113–126.

Boyd, J., Barnett, W.S., Bodrova, E., Leong, D.J., Gomby, D., Robin, K.B. and Hustedt, J.T. (2005). Promoting Children's Social and Emotional Development Through Preschool. NIEER Policy Report (March 2005). New Brunswick, New Jersey: National Institute for Early Education Research, Rutgers University.

Boyle, D., Coote, A., Sherwood, C., & Slay, J. (2010). Right Here, Right Now: Taking co-production into the mainstream. London, UK: new economics foundation. Retrieved from: http://www.neweconomics.org/sites/neweconomics.org/files/Right_Here_Right_Now.pdf.

Bradley, R.H. & Vandell, D.L. (2007). Child care and the well-being of children. Archives of Pediatric and Adolescent Medicine, 161 (7), 669-676.

Brauner, J., Gordic, B., & Zigler, E. (2004). Putting the Child Back Into Child Care: Combining Care and Education for Children Ages 3-5. Social Policy Report, 18 (3).

Brennan, D. (2007). Home and away: the policy context in Australia. In E.Hill, B. Pocock, & A. Elliott (Eds.). Kids Count. Better Early Childhood Education and Care in Australia (pp.57-75). Sydney, NSW: Sydney University Press.

Brennan, D. (2013). Joining the dots: Program and funding options for integrated Aboriginal and Torres Strait Islander children's services. Retrieved from: http://www.snaicc.org.au/_uploads/rsfil/03244.pdf

Bridgespan Group. (2011). Next Generation Community Revitalization: A Work in Progress. Boston, Massachusetts: The Bridgespan Group. Retrieved from: http://www.bridgespan.org/getattachment/cd9eec53-9303-48da-bddf-e701ec061d4c/Next-Generation-Community-Revitalization-A-Work-in.aspx.

Brooks-Gunn, J., & Duncan, G. J. (1997). The effects of poverty on children. The Future of Children, 7 (2), 55-71.

Buysse, V. & Wesley, P.W. (2010). Program quality through the lens of disruptive innovation theory. In P.W. Wesley & V. Buysse (Eds.), The Quest for Quality: Promising Innovations for Early Childhood Programs. Baltimore, Maryland: Paul H. Brookes.

Carbone, S., Fraser, A., Ramburuth, R. & Nelms, L. (2004). Breaking Cycles, Building Futures. Promoting inclusion of vulnerable families in antenatal and universal early childhood services: A report on the first three stages of the project. Melbourne, Victoria, Victorian Department of Human Services. Retrieved from: http://www.eduweb.vic.gov.au/edulibrary/public/beststart/ecs_breaking_cycles_best_start.pdf.

Cassells, R., Toohey, M., Keegan, M. and Mohanty, I. (2013). Modern Family: The Changing Shape of Australian Families (AMP NATSEM Income and Wealth Report Issue 34). Sydney, NSW: AMP. Retrieved from: http://www.natsem.canberra.edu.au/storage/Modern%20family%20AMP%20NATSEM%20report%2034.pdf

CCCH (Centre for Community Child Health). (2007). Early Years Care and Education (CCCH Policy Brief No. 8). Parkville, Victoria: Centre for Community Child Health, The Royal Children's Hospital. Retrieved from: http://www.rch.org.au/uploadedFiles/Main/Content/ccch/PB8_EYCE.pdf

CCCH (Centre for Community Child Health). (2009). Engaging Marginalised Children and their Families (CCCH Policy Brief No. 18). Parkville, Victoria: Centre for Community Child Health, The Royal Children's Hospital. Retrieved from: http://www.rch.org.au/uploadedFiles/Main/Content/ccch/PB18_Vulnerable_families.pdf

CCCH (Centre for Community Child Health). (2009). Integrating Services for Young Children and their Families (CCCH Policy Brief No. 17). Parkville, Victoria: Centre for Community Child Health, The Royal Children's Hospital. Retrieved from: http://www.rch.org.au/uploadedFiles/Main/Content/ccch/PB_17_FINAL_web.pdf

Centre for Community Child Health & Telethon Institute for Child Health Research (2009). A Snapshot of Early Childhood Development in Australia: AEDI National Report 2009. Canberra, ACT: Australian Government.

Centre for Community Child Health and Telethon Institute for Child Health Research (2007). Australian Early Development Index: Building better communities for children: Community results 2004-06. Canberra, ACT: Australian Government Department of Families, Community Services and Indigenous Affairs, Commonwealth of Australia.

Centre for Community Child Health and Telethon Institute for Child Health Research (2013). A Snapshot of Early Childhood Development in Australia 2012: Australian Early Development Index (AEDI) National Report. Canberra, ACT: Australian Government Department of Education, Employment and Workplace Relations. Retrieved from: http://www.rch.org.au/uploadedFiles/Main/Content/aedi/Report_NationalReport_2012_1304[1](1).pdf

Center on the Developing Child at Harvard University. (2010). The Foundations of Lifelong Health Are Built in Early Childhood. Retrieved from: http://www.developingchild.harvard.edu.

Claessens, Amy and Chen, Jen-Hao (2013). Multiple child care arrangements and child well being: Early care experiences in Australia. Early Childhood Research Quarterly, 28 (1), 49-61. http://dx.doi.org/10.1016/j.ecresq.2012.06.003

Cleveland, G., Corter, C., Pelletier, J., Colley, S., Bertrand, J., & Jamieson, J. (2006). A Review of the State of the Field of Early Childhood Learning and Development in Child Care, Kindergarten and Family Support Programs. Toronto, Ontario: Atkinson Centre for Society and Child Development, Ontario Institute for Studies in Education, University of Toronto.

Cloney, D., Page, J., Tayler, C. and Church, A. (2013). Assessing the quality of early childhood education and care (CCCH Policy Brief No. 25). Parkville, Victoria: Centre for Community Child Health, The Royal Children's Hospital. Retrieved from: http://www.rch.org.au/uploadedFiles/Main/Content/ccch/Policy_Brief_25_Quality.pdf

COAG (Council of Australian Governments). (2009). Investing in the Early Years – A National Early Childhood Development Strategy. Retrieved from: http://www.coag.gov.au/sites/default/files/national_ECD_strategy.pdf

Coley, R.L., Votruba-Drzal, E., Miller, P. and Koury, A. (2013). Timing, extent, and type of child care and children's behavioral functioning in kindergarten. Developmental Psychology, 49 (10), 1859-1873. doi: 10.1037/a0031251

Cortis, N., Katz, I., & Patulny, R. (2009). Engaging hard-to-reach families and children (Occasional Paper No. 26). Canberra: Department of Families, Housing, Community Services and Indigenous Affairs.

Council of Australian Governments (2009a). The National Early Childhood Development Strategy - Investing in the Early Years. Canberra, ACT: Council of Australian Governments. Retrieved from: http://www.deewr.gov.au/EarlyChildhood/Policy_Agenda/Documents/National%20ECD%20Strategy%202%20July%202009.pdf

Council of Australian Governments (2009b). Protecting Children is Everyone's Business: National Framework for Protecting Australia's Children 2009–2020. Canberra, ACT: Council of Australian Governments. Retrieved from: http://www.coag.gov.au/coag_meeting_outcomes/2009-04-30/docs/child_protection_framework.pdf

Cunha, F., & Heckman, J. J. (2006). Investing in Our Young People (Report prepared for America's Promise – The Alliance for Youth). Chicago, Illinois: University of Chicago. Retrieved from: http://www-news.uchicago.edu/releases/06/061115.education.pdf.

David, T. (2003). What Do We Know About Teaching Young Children? Macclesfield, Cheshire: British Educational Research Association.

Day, C., Michelson, D., Thomson, S., Penney, C., & Draper, L. (2012). Empowering Parents, Empowering Communities: A pilot evaluation of a peer-led parenting programme. Child and Adolescent Mental Health, 17 (1), 52–57.

de Schipper, J., Tavecchio, L., van Ijzendoorn, M., & van Zeijl, J. (2004). Goodness of fit in day care: Relations of temperament, stability, and quality of care with child's adjustment. Early Childhood Research Quarterly, 19, 257–272. http://dx.doi.org/10.1016/j.ecresq.2004.04.004

Denburg, A. and Daneman, D. (2010). The link between social inequality and child health outcomes. Healthcare Quarterly, 14 (Sp), 21-31.

Dockett, S. and Perry, B. (2001). Starting school: effective transitions. Early Childhood Research and Practice, 3 (2), e 1-14.

Doherty, G. (2007). Ensuring the best start in life: Targeting versus universality in early childhood development. IRPP Choices, Vol. 13, no. 8. http://www.irpp.org/choices/archive/vol13no8.pdf

Doyle, O., Harmon, C. P., Heckman, J. J., & Tremblay, R. E. (2009). Investing in early human development: Timing and economic efficiency. Economics and Human Biology, 7 (1), 1-6.

Duffy, B. (2006). The curriculum from birth to six. In G. Pugh and B. Duffy (Eds.). Contemporary Issues in the Early Years (4th. Ed.). London, UK: Paul Chapman.

Early Childhood Australia and Early Childhood Intervention Australia. (2012). Position statement on the inclusion of children with a disability in early childhood education and care. Retrieved from: www.eciavic.org.au/documents/item/236

Early Childhood Learning Knowledge Centre (2006). Why is High-Quality Child Care Essential? The Link Between Quality Child Care and Early Learning. Montreal, Quebec: Early Childhood Learning Knowledge Centre. http://www.ccl-cca.ca/CCL/Reports/LessonsInLearning/20060530LinL.htm

Early, D. M., Maxwell, K. L., Burchinal, M., Bender, R. H., Ebanks, C., Henry, G. T., et al. (2007). Teachers' education, classroom quality, and young children's academic skills: results from seven studies of preschool programs. Child Development, 78 (2), 558-80.

Elliott , A. (2006). Early childhood education: pathways to quality and equity for all children (Australian Education Review No 50). Melbourne, Victoria: Australian Council for Educational Research. Retrieved from: http://www.acer.edu.au/documents/AER_50-QualityAndChoice.pdf.

Evans, G. W., Li, D., & Whipple, S. S. (2013). Cumulative risk and child development. Psychological Bulletin, 139 (6), 1342-96. doi: 10.1037/a0031808.

Feinstein, L. (2003). Inequality in the early cognitive development of British children in the 1970 cohort. Economica, 70, 73-97.

Feinstein, L., & Bynner, J. (2004). The importance of cognitive development in middle childhood for adulthood socioeconomic status, mental health, and problem behaviour. Child Development, 75 (5), 1329-1339.

Field, F. (2010). The Foundation years: preventing poor children becoming poor adults. Retrieved from: www.bristol.ac.uk/ifssoca/outputs/ffreport.pdf

Fram, M. S. (2003). Managing to parent: social support, social capital, and parenting practices among welfare-participating mothers with young children (Discussion paper 1263-03). Washington, DC: Institute for Research on Poverty.

Fram, M.S., Kim, K. and Sinha, S. (2012). Early care and prekindergarten care as influences on school readiness. Journal of Family Issues, 33: 478-505. doi:10.1177/0192513X11415354

Friendly, M. (2008). Building a strong and equal partnership between childcare and early childhood education in Canada. International Journal of Child Care and Education Policy, 2 (1), 39-52.

Gallagher, J., Clifford, R. M., & Maxwell, K. L. (2004). Getting from here to there: To an ideal early preschool system. Early Childhood Research and Practice, 6 (1).

Gallo, L.C., & Matthews, K.A. (2003). Understanding the association between socioeconomic status and physical health: Do negative emotions play a role? Psychological Bulletin, 129 (1), 10-51.

Ghate, D., & Hazel, N. (2002). Parenting in Poor Environments: Stress, Support and Coping. London, UK: Jessica Kingsley Publishers.

Gluckman, P. D., & Hanson, M. A. (2004). Developmental origins of disease paradigm: A mechanistic and evolutionary perspective. Pediatric Research, 56 (3), 311-317.

Goldfeld, S., O'Connor, M., Sayers, M., Moore, T. and Oberklaid, F. (2012). The prevalence and correlates of special health care needs in a population cohort of Australian children at school entry. Journal of Developmental and Behavioural Pediatrics, 33 (3), 1-9.

Goldfeld, S., O'Connor,E., O'Connor, M., Sayers, M., Moore, T.G., Kvalsvig, A. & Brinkman, S. (submitted). The role of early childhood education and care in promoting children's early development: Evidence from an Australian population cohort. Early Childhood Research Quarterly.

Gormley, W. T. (2007). Early childhood care and education: Lessons and puzzles. Journal of Policy Analysis and Management, 26 (3), 633-671.

Graves, B. (2006). PK-3: What Is It and How Do We Know It Works? New York: Foundation for Child Development.

Gunnar, M. R., Kryzer, E., Van Ryzin, M. J., & Philips, D. A. (2010). The rise in cortisol in family day care: Associations with aspects of care quality, child behavior, and child sex. Child Development, 81 (3), 851–869.

Halle, T., Forry, N., Hair, E., Perper, K., Wandner, L., Wessel, J., & Vick, J. (2009). Disparities in Early Learning and Development: Lessons from the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B). Washington, DC: Child Trends. Retrieved from: http://www.childtrends.org/Files/Child_Trends-2009_07_10_FR_DisparitiesEL.pdf.

Harris, N., & Tinning, B. (2012). Hearing parents' and carers' voices: experiences of accessing quality long day care in northern regional Australia. Australasian Journal of Early Childhood, 37 (3), 14-21.

Harrison, L.J. (2008). Does child care quality matter? Associations between socio-emotional development and non-parental child care in a representative sample of Australian children. Family Matters, No. 79, 14-25.

Hayes, A., Weston, R., Qu, L., & Gray, M. (2010). Families then and now: 1980-2010 (AIFS Facts Sheet). Melbourne, Victoria: Australian Institute of Family Studies.

Head, B., & Alford, J. (2008). Wicked Problems: The Implications for Public Management. Presentation to Panel on Public Management in Practice, International Research Society for Public Management 12th Annual Conference, 26-28 March, 2008, Brisbane.

Heckman, J. J. (2008). Schools, skills, and synapses (NBER Working Paper 14064). Cambridge, Massachusetts: National Bureau of Economic Research.

Heckman, J. J. (2012). The developmental origins of health. Health Economics, 21 (1), 24–29. doi: 10.1002/hec.1802

Hertzman, C. (2010). Social geography of developmental health in the early years. Healthcare Quarterly, 14 (Sp), 32-40.

Hopkins, L., & Meredyth, D. (2008). Coordination or competition: obstacles and success factors for integrated partnerships at local level. Journal of Urban Regeneration and Renewal, 1 (4), 316-328.

Howes, C., Bryant, D., Burchinal, M., Clifford, R., Early, D., Pianta, R., Barbarin, O. and Ritchie, S. (2006). Preschool: Its Benefits, and Who Should Teach. Statement from the National Center for Early Development and Learning. Chapel Hill, North Carolina: National Center for Early Development and Learning, FPG Child Development Institute. http://www.fpg.unc.edu/~NCEDL/pdfs/NCEDLPreschoolStatement.pdf

Hrdy, S.B (2009). Allomothers across species, across cultures, and through time. Prologue in G. Bentley and R. Mace (Eds.)(2009). Substitute Parents: Biological and Social Perspectives on Alloparenting in Human Societies. New York: Berghahn Books.

Human Early Learning Partnership. (2011). Proportionate Universality. HELP Policy Brief. Vancouver, Canada: Human Early Learning Partnership, University of British Columbia. Retrieved from: http://earlylearning.ubc.ca/media/publications/proportionate_universality_brief__-_final.pdf.

Jolin, M., Schmitz, P. and Seldon, W. (2012). Needle-Moving Community Collaboratives: A Promising Approach to Addressing America's Biggest Challenges. Boston, Massachusetts: The Bridgespan Group.

Kagan, S. L., Britto, P. R., Kauerz, K. and Tarrant, K. (2005). Washington State Early Learning and Development Benchmarks. Olympia, WA: Office of the Governor and the Office of the Superintendent of Public Instruction. http://www.k12.wa.us/EarlyLearning/pubdocs/EarlyLearningBenchmarks.pdf

Kania, J. and Kramer, M. (2011). Collective impact. Stanford Social Innovation Review, Winter, 36-41.

Kelley, P. & Camilli, G. (2007). The impact of teacher education on outcomes in center-based education programs: A meta-analysis. NIEER Working Papers.

King, G., Tucker, M., Baldwin, P., Lowry, K., LaPorta, J. and Martens, L. (2002). A life needs model of pediatric service delivery: Services to support community participation and quality of life for children and youth with disabilities. Physical and Occupational Therapy in Pediatrics, 22 (2), 53-77.

Lally, J. R. (2007). Teaching and caring: Responding to both the vulnerability and competence of infants and toddlers. Childcare and Children's Health, 10 (3), 1-6. Retrieved from: http://www.rch.org.au/emplibrary/ecconnections/CCH_Vol10_No3_September2007.pdf.

Law, M., King, G., King, S., Kertoy, M., Hurley, P., Rosenbaum, P., Young, N., Hanna, S., & Petrenchik, T. (2006). Patterns and Predictors of Recreational and Leisure Participation for Children with Physical Disabilities. Keeping Current #02-2006. Hamilton, Ontario: CanChild Centre for Childhood Disability Research, McMaster University.

Le, V.N., Kirby, S.N., Barney, H., Setodji, C.M., & Gershwin, D. (2006). School Readiness, Full-Day Kindergarten, and Student Achievement: An Empirical Investigation. Santa Monica, California: RAND Corporation.

Lee, K. (2014). Impact of child care arrangements on Australian children's cognitive outcome: moderation effects of parental factors. Child & Family Social Work, published online 22 January 2014.

Lee, S., Drake E., Pennucci, A., Bjornstad, G., & Edovald, T. (2012). Economic evaluation of early childhood education in a policy context. Journal of Children's Services, 7 (1), 53-63.

Lee, V.E. and Burkam, D.T. (2002). Inequality at the starting gate: Social background differences in achievement as children begin school. Washington, DC: Economic Policy Institute.

Leigh, A. (2013). Battlers and Billionaires: The Story of Inequality in Australia. Collingwood, Victoria: Redback.

Lekhal, R. (2012). Do type of childcare and age of entry predict behavior problems during early childhood? Results from a large Norwegian longitudinal study. International Journal of Behavioral Development, 36 (3), 197-204. doi: 10.1177/0165025411431409

Lewis, M. (1997). Altering Fate: Why the Past Does Not Predict the Future. New York: The Guilford Press.

Lewis, M. (2005). The child and its family: The social network model. Human Development, 48 (1-2), 8-27.

Lewis, M., & Mayes, L.C. (2012). The role of environments in development: An introduction. In L.C. Mayes and M. Lewis (Eds.). The Cambridge Handbook of Environment in Human Development. Cambridge, UK: Cambridge University Press.

Li, J., McMurray, A., & Stanley, F. (2008). Modernity's paradox and the structural determinants of child health and well-being. Health Sociology Review, 17 (1), pp. 64-77.

Lloyd-Jones, L. (2002). Relationship as curriculum (Head Start Bulletin No 73). Retrieved from: http://www.headstartinfo.org/publications/hsbulletin73/hsb73_04.htm

Loeb, S., Bridges, M., Bassok, D., Fuller, B & Rumberger, R.W. (2007). How much is too much? The influence of preschool centers on children's social and cognitive development. Economics of Education Review, 26 (1), 52–66. http://dx.doi.org/10.1016/j.econedurev.2005.11.005

London School of Economics. (2007). Cost Benefit Analysis of Interventions with Parents. Research Report DCSF-RW008. London, UK: Department for Children, Schools and Families. Retrieved from: http://www.education.gov.uk/publications/eOrderingDownload/DCSF-RW008.pdf.

Luster, T. and Okagaki, L. (Eds.) (2005). Parenting: An Ecological Perspective (2nd. Ed.). Marwah, New Jersey: Lawrence Erlbaum.

Macmillan, R., McMorris, B. J., & Kruttschnitt, C. (2004). Linked lives: Stability and change in maternal circumstances and trajectories of antisocial behavior in children. Child Development, 75 (1), 205-220.

Magnuson, K.A., Ruhm, C., & Waldfogel, J. (2007). Does prekindergarten improve school preparation and performance? Economics of Education Review, 26 (1), 33-51.

Marmot, M. (2006). Health in an unequal world. The Lancet, 368, 9552, 2081-2094.

Martin, R. P., & Dombrowski, S. C. (2008). Prenatal exposures: Psychological and educational consequences for children. New York: Springer.

Mayes, L. and Lewis, M. (Eds.) (2012). The Cambridge Handbook of Environment in Human Development. Cambridge, UK: Cambridge University Press.

McCartney, K., Burchinal, M., Clarke-Stewart, A., Bub, K.L., Owen, M.T. and Belsky, J. (2010). Testing a series of causal propositions relating time in child care to children's externalizing behavior. Developmental Psychology, 46 (1), 1-17. doi: 10.1037/a0017886

McDonald, M. (2011). Are disadvantaged families "hard to reach"? Engaging disadvantaged families in child and family services (CAFCA Practice Sheet). Melbourne, Victoria: Communities and Families Clearinghouse Australia, Australian Institute of Family Studies. Retrieved from: http://www.aifs.gov.au/cafca/pubs/sheets/ps/ps1.html

McShane, I. (2010). Trojan horse or adaptive institutions? Some reflections on urban commons in Australia. Urban Policy and Research, 28 (1), 101-116.

Meehan, C.L. (2014). Allomothers and child well-being. Ch. 61 in A. Ben-Arieh, F. Casas, I. Frønes, and J.E. Korbin (Eds.), Handbook of Child Well-Being. Springer Netherlands.

Melhuish, E.C. (2003). A Literature Review of the Impact of Early Years Provision on Young Children, with Emphasis Given to Children from Disadvantaged Backgrounds. London, UK: National Audit Office. Retrieved from: http://www.nao.org.uk/publications/nao_reports/03-04/268_literaturereview.pdf

Melhuish, E. (2010b). A linked study: Effective Pre-school Provision in Northern Ireland. In K. Sylva, E. Melhuish, P. Sammons, I. Siraj-Blatchford and B. Taggart (Eds.). Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project. London, UK: Routledge.

Melhuish, E. (2010a). Why children, parents and home learning are important. In K. Sylva, E. Melhuish, P. Sammons, I. Siraj-Blatchford and B. Taggart (Eds.). Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project. London, UK: Routledge.

Melhuish, E., & Petrogiannis, K. (2006). Early Childhood Care and Education: International Perspectives. Abingdon, Oxford, UK: Routledge.

Melhuish, E. C., Sylva, K., Sammons, P., Siraj-Blatchford, I., Taggart, B., Phan, M. B., & Malin, A. (2008). The early years: Preschool influences on mathematics achievement. Science, 29 (321), 1161-1162.

Miller, G. E., Chen, E., & Parker, K. J. (2011). Psychological stress in childhood and susceptibility to the chronic diseases of aging: Moving toward a model of behavioral and biological mechanisms. Psychological Bulletin, 137 (6), 959–997.

Ministry of Education (1996). Te Whāriki: He Whāriki Mātauranga mō ngā Mokopuna o Aotearoa: Early Childhood Curriculum. Wellington, New Zealand: Learning Media. Retrieved from: http://www.educate.ece.govt.nz/learning/curriculumAndLearning/TeWhariki.aspx

Mitchell, L., Wylie, C. and Carr, M. (2008). Outcomes of early childhood education: Literature review. New Zealand Council for Educational Research. http://www.educationcounts.govt.nz/__data/assets/pdf_file/0003/24456/885_Outcomes.pdf

Moore, T. G., & Fry, R. (2011). Place-based Services: A Literature Review. Parkville, Victoria: Centre for Community Child Health.

Moore, T. G., & McDonald, M. (2013). Acting Early, Changing Lives: How prevention and early action saves money and improves wellbeing. Prepared for The Benevolent Society. Parkville, Victoria: Centre for Community Child Health at the Murdoch Childrens Research Institute and the Royal Children's Hospital.

Moore, T. G., & Skinner, A. (2010). An Integrated Approach to Early Childhood Development. A Benevolent Society Background Paper. Sydney, NSW: The Benevolent Society. Retrieved from: http://www.rch.org.au/emplibrary/ccch/TM_BenSoc_Project_09.pdf.

Moore, T. G., Yagnik, P., Halloran, D., McDonald, M., Sayers, M., D'Souza, A., & Goldfeld, S. (2012b). Developing the Parent Engagement Resource: A tool for enhancing parent/professional relationships and identifying psychosocial issues in families. Australian Journal of Child and Family Health Nursing, 9 (1), 12-16.

Morrissey, T., & Warner, M. (2007). Why early care and education deserves as much attention, or more, than prekindergarten alone. Applied Development Science, 11 (2), 57-70.

National Professional Development Center on Inclusion (2009). Research Synthesis Points on Early Childhood Inclusion. Chapel Hill, North Carolina: National Professional Development Center on Inclusion, FPG Child Development Institute, University of North Carolina. Retrieved from:

National Scientific Council on the Developing Child (2006). Early Exposure to Toxic Substances Damages Brain Architecture. (2006). NSCDC Working Paper No. 4. Waltham, Massachusetts: National Scientific Council on the Developing Child, Brandeis University.

National Scientific Council on the Developing Child. (2007). The Timing and Quality of Early Experiences Combine to Shape Brain Architecture (NSCDC Working Paper #5). Cambridge, Massachusetts: Centre on the Developing Child, Harvard University. Retrieved from: http://www.developingchild.net/pubs/wp/Timing_Quality_Early_Experiences.pdf.

Naughton, A.M., Maguire, S.A., Mann, M.K., Lumb, R.C., Tempest, V., Gracias, S., and Kemp, A.M. (2013). Emotional, behavioral, and developmental features indicative of neglect or emotional abuse in preschool children: A systematic review. JAMA Pediatrics, 167 (8), 769-75. doi: 10.1001/jamapediatrics.2013.192.

Nicholson, J. M., Lucas, N., Berthelsen, D., & Wake, M. (2010). Socioeconomic inequality profiles in physical and developmental health from 0-7 years: Australian national study. Journal of Epidemiology and Community Health, first published online 19 October 2010.

Nussbaum, M. (2000). Women and Human Development: The Capabilities Approach. Cambridge, UK: Cambridge University Press.

Nussbaum, M. (2011). Creating Capabilities: The Human Development Approach. Cambridge, Massachusetts: Harvard University Press.

OECD (2001). Starting Strong: Early Childhood Education and Care. Paris, France: Organisation for Economic Cooperation and Development (OECD).

OECD (2006). Starting Strong II: Early Childhood Education and Care. Paris, France: Organisation for Economic Development.

Paul, A.M. (2010). Origins: How the Nine Months Before Birth Shape the Rest of Our Lives. New York: Free Press.

Peisner-Feinberg, E.S. & Yazejian, N. (2010). Research on program quality: The evidence base. In P.W. Wesley & V. Buysse (Eds.), The Quest for Quality: Promising Innovations for Early Childhood Programs. Baltimore, Maryland: Paul H. Brookes.

Penn, H. (2009). Early childhood education and care: Key lessons from research for policy makers. Brussels, Belgium: European Commission & Network of Experts in Social Sciences of Education and Training (NESSE).

Phillips, D.A. and Lowenstein, A.E. (2011). Early care, education, and child development. Annual Review of Psychology, 62: 483-500. DOI: 10.1146/annurev.psych.031809.130707

Pocock, B., & Hill, E. (2007). The childcare policy challenge in Australia. In E.Hill, B. Pocock, & A. Elliott (Eds.). Kids Count. Better Early Childhood Education and Care in Australia (pp.15-38). Sydney, NSW: Sydney University Press.

Press, F. (2006). What About the Kids? Policy directions for improving the experiences of infants and young children in a changing world. Sydney, NSW: NSW Commission for Children and Young People, Queensland Commission for Children and Young People and Child Guardian, and the National Investment for the Early Years.

Productivity Commission. (2011). Early Childhood Development Workforce (Research report). Melbourne, Victoria.

Reardon, S.F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations. In R. Murnane & G. Duncan (Eds.), Whither opportunity? Rising inequality and the uncertain life changes of low-income children. New York: Russell Sage Foundation Press.

Richardson, S., & Prior, M. (2005). No Time to Lose: The Wellbeing of Australia's Children. Melbourne, Victoria, Melbourne University Press.

Rigney, D. (2010). The Matthew Effect: How Advantage Begets Further Advantage. New York: Columbia University Press.

Robinson, R. (2014). To whom, in relation to what, and why? Accountability in the contemporary market for early childhood education and care in Victoria. [Unpublished article].

Rosenbaum, P. (2008). Children's quality of life: separating the person from the disorder. Archives of Disease in Childhood, 93(2), 100-101.

Rush, E., & Downie, C. (2006). ABC Learning Centres. A case study of Australia's largest child care corporation. *Discussion Paper No. 87.* Canberra, ACT: The Australia Institute.

Sammons, P. (2010). Does pre-school make a difference?: Results over the pre-school period (to aged 5). In K. Sylva, E. Melhuish, P. Sammons, I. Siraj-Blatchford and B. Taggart (Eds.). Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project. London, UK: Routledge.

Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Barreau, S., & Grabbe, Y. (2007). Effective Pre-School and Primary Education 3-11 Project (EPPE 3-11): Influences on Children's Development and Progress in Key Stage 2: Social / Behavioural Outcomes in Year 5. London, UK: Department for Children, Schools and Families.

Sanson, A., Smart, D. and Misson, S. (2011), Children's socio-emotional, physical, and cognitive outcomes: Do they share the same drivers? Australian Journal of Psychology, 63 (1), 56–74.

Saracho, O.N. and Spodek, B. (2007). Early childhood teachers' preparation and the quality of program outcomes. Early Child Development and Care, 177 (1), 71-91.

Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R. & Nores, M. (2011). The High/Scope Perry Preschool Study Through Age 40. Retrieved from: http://www.highscope.org/file/Research/PerryProject/specialsummary_rev2011_02_2.pdf.

Sen, A. (1985). Commodities and Capabilities. Amsterdam & New York: North-Holland.

Sen, A. (2005). Human rights and capabilities. Journal of Human Development, 6 (2), 151-166.

Shonkoff, J. P. (2012). Leveraging the biology of adversity to address the roots of disparities in health and development. Proceedings of the National Academy of Sciences. Retrieved from: http://www.pnas.org/content/early/2012/10/04/1121259109.full.pdf+html

Shonkoff, J. P., Boyce, W. T. & McEwen, B. (2009). Neuroscience, molecular biology, and the childhood roots of health disparities: Building a new framework for health promotion and disease prevention. Journal of the American Medical Association, 301 (21), 2252-2259.

Shonkoff, J., & Phillips, D. (Eds.) (2000). From Neurons to Neighborhoods: The Science of Early Childhood Development, NRCIM. Washington, DC: National Academy Press.

Sims, M., Guilfoyle, A., & Parry, T. S. (2006). Children's cortisol levels and quality of child care provision. Child: Care, Health & Development, 4 (453-466).

Social Exclusion Task Force (2007). Reaching Out: Think Family. Analysis and themes from the Families At Risk Review. London, UK: Social Exclusion Task Force, Cabinet Office.

Sosinsky, L. S., Lord, H., & Zigler, E. (2007). For-profit/nonprofit differences in center-based child care quality: Results from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development. Journal of Applied Developmental Psychology, 28(2007), 390-410.

Stipek, D. (2001). Pathways to constructive lives: The importance of early school success. In C. Bohart and D. Stipek (Eds.). Constructive and Destructive Behaviour: Implications for family, school and society. Washington, DC: American Psychological Association.

Strategic Review of Health Inequalities in England post-2010 Committee. (2010). Fair Society, Healthy Lives (The Marmot Review). Strategic Review of Health Inequalities in England post-2010. Retrieved from: http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review.

Sylva, K. (2010). Re-thinking the evidence-base for Early Years policy and practice. In K. Sylva, E. Melhuish, P. Sammons, I. Siraj-Blatchford and B. Taggart (Eds.). Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project. London, UK: Routledge.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2004). The Effective Provision of Pre-School Education [EPPE] Project: Final Report. London, UK: Institute of Education, University of London. Retrieved from: http://www.surestart.gov.uk/_doc/P0001378.pdf.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2010). Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education Project. London, UK: Routledge.

Tayler, C., Ishimine, K., Cloney, D., Cleveland, G. and Thorpe, K. (2013). The quality of early childhood education and care services in Australia. Australasian Journal of Early Childhood, 38 (2), 13-21.

Taylor, E., & Rogers, J. W. (2005). Practitioner Review: Early adversity and developmental disorders. Journal of Child Psychology and Psychiatry, 46(5), 451-467.

The Future of Children. (2005). Executive summary of special issue on School Readiness: Closing Racial and Ethnic Gaps. The Future of Children, 15 (1), Spring 2005. Retrieved from: http://futureofchildren.org/futureofchildren/publications/docs/15_01_ExecSummary.pdf

Tran, H. & Weinraub, M. (2006) Child care effects in context: quality, stability, and multiplicity in nonmaternal child care arrangements during the first 15 months of life. Developmental Psychology, 42 (3), 566–582.

Trask, B.S. (2010). Globalization and Families: Accelerated Systemic Social Change. New York: Springer.

Ungerer, J., Harrison, L. J., Taylor, A., Bowes, J., Wise, S., Edwards, B. et al. (2006). An evaluation of child care factors in young children's social-emotional development. Paper presented at the 19th Biennial Meeting of the International Society for the Study of Behavioural Development, Melbourne.

van IJzendoorn, M. H., & Juffer, F. (2006). Adoption as intervention: Meta-analytic evidence for massive catch-up and plasticity in physical, socio-emotional, and cognitive development. Journal of Child Psychology and Psychiatry, 47 (12), 1228-1245.

Vandell, D. L., Belsky, J., Burchinal, M., Steinberg, L., Vandergrift, N. and NICHD Early Child Care Research Network (2010). Do effects of early child care extend to age 15 Years? Results

from the NICHD Study of Early Child Care and Youth Development. Child Development, 81 (3), 737–756. doi: 10.1111/j.1467-8624.2010.01431.x

Votruba-Drzal, E., Coley, R.L., Koury, A.S. and Miller, P. (2013). Center-based child care and cognitive skills development: Importance of timing and household resources. Journal of Educational Psychology, 105 (3), 821-838. doi: 10.1037/a0032951

Wasik, B. A., Mattera, S. K., Lloyd, C. M., & Boller, K. (2013). Intervention dosage in early childhood care and education: It's complicated. OPRE Research Brief OPRE 2013-15. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. http://www.acf.hhs.gov/sites/default/files/opre/dosage_brief_final_001_0.pdf

Wear, A. (2007). Place-based partnerships in Victoria. Public Administration Today, Issue 12 (July-September), 20-26.

Wilkinson, R. G., & K. E. Pickett. (2009). The Spirit Level: Why More Equal Societies Almost Always Do Better. London, UK: Allen Lane.

Wiseman, J. (2006). Local heroes: Learning from community strengthening policy developments in Victoria. Australian Journal of Public Administration, 65 (2), 95-107.

Work and Family Policy Roundtable (2006). Ten Policy Principles for a National System of Early Childhood Education and Care. Summary of Academy of Social Science Workshop on *Childcare: A Better Policy Framework for Australia*, Sydney, 13th-14th July.

Workgroup on Principles and Practices in Natural Environments (2008a). Agreed upon mission and key principles for providing early intervention services in natural environments. Chapel Hill, North Carolina: National Early Childhood Technical Assistance Centre, Office of Special Education Programs, US Department of Education. http://ectacenter.org/~pdfs/topics/families/Finalmissionandprinciples3_11_08.pdf

Workgroup on Principles and Practices in Natural Environments (2008b). Agreed upon practices for providing early intervention services in natural environments. Chapel Hill, North Carolina: National Early Childhood Technical Assistance Centre, Office of Special Education Programs, US Department of Education. http://www.nectac.org/~pdfs/topics/families/AgreedUponPractices_FinalDraft2_01_08.pdf

Yamauchi, C., & Leigh, A. (2011). Which children benefit from non-parental care? Economics of ation Review, 30 (6), 1468–1490. doi:10.1016/j.econedurev.2011.07.012

Zachrisson, H.D., Dearing, E., Lekhal, R., Toppelberg, C.O. (2013). Little evidence that time in child care causes externalizing problems during early childhood in Norway. Child Development, published online ahead of print 11th January 2013. doi: 10.1111/cdev.12040.

Zubrick, S. R., Taylor, C. L., Lawrence, D. M., Mitrou, F. G., Christensen, D., & Dalby, R. (2009). The development of human capability across the lifecourse: Perspectives from childhood. Australian Epidemiologist, 16 (3), 6-10.

Acknowledgements

This submission was written by Dr Tim Moore and Dr Myfanwy McDonald of the Research and Policy team at the Centre for Community Child Health.

Thanks to Ms Rachel Robinson, Associate Professor Sharon Goldfeld, Ms Sue West & Professor Frank Oberklaid for their invaluable feedback and advice.