

# Opportunities for ECEC in Australia

## Submission of the Australian Education Research Organisation to the Productivity Commission Inquiry into Early Childhood Education and Care

May 2023

The Australian Education Research Organisation (AERO) welcomes the opportunity to respond to the Productivity Commission's Inquiry into Early Childhood Education and Care call for submissions. Our submission outlines current issues and opportunities to strengthen the system architecture, towards better access and more equitable outcomes for children and their families – especially those experiencing vulnerability and disadvantage.

This submission draws on reviews of Australian and international evidence, landscape analysis of the ECEC system, and lessons from collaborations with policymakers, peak organisations and service providers.

### What do we know?

#### **Australia's ECEC system is complex and fragmented**

Research comparing ECEC in Australia with other high performing ECEC systems around the world has identified 5 building blocks of an effective early childhood system:

1. strong policy foundations
2. comprehensive services, funding and governance
3. knowledgeable and supported teachers and families
4. informed, individualised and continuous pedagogy
5. data to drive improvement (Kagan, 2019).

Kagan's study noted the National Quality Framework (NQF) and the Early Years Learning Framework (EYLF) as exemplars of national cooperation that provided strong

policy foundations, and underpinned informed, individualised and continuous pedagogy, and data for driving improvement. Indeed, the guiding principles of the NQF and the EYLF contribute to the realisation of Goal 1 and Goal 2 of the Mparntwe Education Declaration (Education Council, 2019). However, the authors also argued that addressing persistent inequities for children would require greater pursuit of collaborative, data-driven approaches to ECEC planning of provision over market strategies if we are to prioritise equity, quality and sustainability (Tayler et al., 2018).

### **Quality matters**

Australian research evidence demonstrates that participation in quality ECEC and facilitated playgroup (including Families as First Teachers) can play an important role in improving equity for children (e.g., Gialamas et al., 2015; Page et al., 2019; Tseng et al., 2019). However, access to high-quality services is unevenly distributed (Cloney et al., 2016), and children from priority cohorts are less likely than their more advantaged peers to have access to quality services (see Attachment 1 for a summary of the literature).

### **An effective ECEC system relies on skilled and supported teachers and educators**

High-performing early childhood systems are staffed by knowledgeable teachers, educators and leaders who are well-supported (Kagan & Melvin et al., 2019). To this end, AERO has worked with researchers, governments, teachers, educators and leaders to develop early childhood learning trajectories for teachers and educators working with children from birth through to the year before school, in 5 key domains. The early childhood learning trajectories demonstrate the science underpinning early childhood practice. They unpack the learning behind children's experiences, and support educators and teachers to understand capabilities in each domain. Importantly, they reinforce the aims of the National Quality Standard (Australian Children's Education and Care Quality Authority [ACECQA], 2017), and support delivery of the Early Years Learning Framework (V2.0) (Australian Government Department of Education [AGDE], 2022).

### **A consistent and stable workforce is essential for enhancing outcomes for children**

Evidence suggests that supports such as mentoring and induction can improve practice and enhance collaboration and connection across the sector. Ensuring that educators and teachers have access to mentoring and induction – especially at key transition points in their career – may help to improve issues related to retention, professional identity and career progression (Bonnett & Ly, 2017; Hogan & White, 2021). AERO is currently undertaking a review of international and domestic evidence related to mentoring and induction as part of the National Children's Education and Care Workforce Strategy led by ACECQA.

## What do we need to know?

### How ECEC experiences contribute to equity

Significant research is needed to understand the ECEC experiences that contribute to more equitable outcomes for children. System leaders place a high value on evidence-based approaches to improving outcomes for children experiencing vulnerability and disadvantage. However, low levels of investment in national research on ECEC has led to an evidence base dominated by small-scale program and process evaluation and an over-reliance on international studies that do not reflect Australia's unique context (Kagan & Sylva et al., 2019). The specific experiences – for example, related to aspects of quality, hours, age of commencement – that will most benefit each child and family may vary depending on their background or circumstances. Significant policy changes over recent years include the introduction of the NQF, successive Universal Access to Early Childhood Education and Care agreements, and changes to child care subsidies. Australia is due for new longitudinal research into the impact of these reforms on children's experiences and outcomes.

### How universal and targeted programs are working together

Improving equity for children experiencing vulnerability and disadvantage is widely understood to require multiple supports that work together (e.g., Molloy et al., 2019; Tseng et al., 2019). At scale, this includes universal and targeted programs and funding strategies at national, state/territory and local levels in a dynamic, interconnected system. Yet Australia lacks durable mechanisms for examining how effectively the array of programs and strategies delivered are working together.

System monitoring should examine how initiatives to improve equity led by different governments and agencies are working together, and provide insights into where the system is functioning well and where more support is required. System leaders (including policymakers, peak bodies and providers) need access to relevant and robust insights from data analysis to inform evidence-based decision-making.

### The effectiveness and efficiency of government investments

Understanding the efficiency and effectiveness of government investment in the sector – including the large investments currently underway to expand 3- and 4-year-old preschool programs – requires system feedback mechanisms that transcend funding auspices and setting types (Kagan & Melvin et al., 2019). Yet data on children's enrolment in preschool and other types of education and care services are not linked, and data on participation are not consistently collected or centrally held. In addition, the best available nationally linked dataset – the Multi-Agency Data Integration Program's First Five Years dataset – cannot provide insights into the impact of preschool quality on children's outcomes. These limitations in the data architecture make monitoring the effectiveness and efficiency of investments exceedingly challenging. In the context of program expansion, establishing a data architecture that

supports governments to understand how programs are contributing to children's outcomes should be a priority.

## What can be done about it?

### **Pursue a cohesive, national early childhood data architecture**

Large-scale system monitoring and evaluation using linked data is an unrealised opportunity for ECEC in Australia (Tayler et al., 2018), despite being relatively well-developed for schools. Given the differentiated yet partially overlapping responsibilities and initiatives at a national and state/territory level, as well as the mixed market of ECEC service provision, early childhood data is held separately by many different custodians, with considerable variation in quality and consistency. It needs to be linked if we want a coherent picture that generates insights about what our policy priorities should be and what works for whom. Furthermore, while there is appetite for large-scale, longitudinal data, the lack of such infrastructure also means the system has not invested in building the human capability to undertake the much-needed analysis.

There are numerous opportunities for leveraging existing early childhood data, discussed in AERO's [Early Childhood Data in Australia report](#). Notably, ECEC data could play an important role in addressing inequity by providing governments with information on the pathways children and families take through the system – especially those whose complex circumstances require the support of multiple services. Contacting, recruiting and retaining these families in programs, services and associated research poses significant challenges. It can also require families to provide information multiple times. With careful attention to privacy and consent, administrative data and national collections with high population coverage can help to overcome these challenges, and provide high-quality evidence about how policies and programs can be 'stacked' most effectively.

The Productivity Commission may wish to consider the following activities:

- establishing a national, child-centred, longitudinal dataset linking the AEDC with participation data in universal and targeted programs across setting types and funding auspice (including at Commonwealth, state and territory levels), to be held by a trusted, independent custodian responsible for its linkage and management
- scoping and securing investment in fit for purpose datasets, bringing together targeted bilateral/multilateral data holdings to answer critical questions for specific stakeholders, recognising that the wide diversity of contexts and provision in Australia demands tailored approaches
- exploring the legal frameworks governing the collection and use of existing data across jurisdictions, identifying opportunities for establishing a consistent national framework (Productivity Commission, 2016) that includes improving data quality on children's enrolment and participation in funded preschool

- securing investment in infrastructure and capability to establish and sustain Indigenous Data Sovereignty, according to agreed principles for governance and data use (Walter et al., 2021)
- engaging historically marginalised communities in interpreting patterns in the data and working with policymakers to develop data-driven responses. This is especially important for large-scale system data analysis, which often occurs at some distance from the families and communities that it aims to support.
- using intergovernmental forums to share progress on data linkage and insights from data.

Despite the eminent promise of large-scale data, its collection, linkage, analysis and dissemination is a slow process. The pipeline from research evidence to application can be shortened when researchers respond to needs that stakeholders want addressed (McConnell & Goldstein, 2021). To this end, AERO is working closely with ECEC system leaders – including policymakers across jurisdictions, and representatives of peaks and providers – as the primary users of system data. Ongoing collaborative work has been valuable for developing relevant research questions and analytic models, and testing and refining findings. Successful data integration and analysis across agencies requires considerable time, resources and relationships (Lynch, 2018; Pilkington et al., 2019). Like any infrastructure project, investing in a data architecture to match governments' considerable program investments is a long-term but necessary pursuit.

### **Pursue analysis to understand the relationships between ECEC participation and outcomes**

AERO has partnered with researchers at the Queensland Brain Institute at the University of Queensland (led by Laureate Professor and Group Leader in Child Development, Education and Care, Karen Thorpe) to conduct exploratory analysis of specific aspects of ECEC quality and how they may contribute to children's outcomes, using detailed research data alongside administrative datasets. Understanding the experiences that matter most for and how that varies depending on children's backgrounds and experiences of disadvantage could help system leaders to direct quality improvement support more effectively.

### **Support teachers and educators with high-quality evidence**

AERO's vision is for Australia to achieve excellence and equity in educational outcomes for all children and young people through effective use of evidence.

In a forthcoming publication (Ramia et al, 2023), AERO has identified that evidence makes a difference when it is rigorous, reliable and implemented well. As such, AERO also distinguishes between:

- quality of evidence use – where evidence is engaged with thoughtfully, appropriately and implemented well

- using high-quality evidence – when evidence is rigorous and reliable, and educators, teachers and leaders have the skills and confidence to assess rigour and reliability.

Improving practice requires opportunities to learn, try and refine new approaches, as well as access to high-quality information (Togher & Fenech, 2020). Evidence can support educators, teachers and leaders to understand which practices work best in different contexts and with different children, and can enable educators, teachers and leaders to tailor their programs and teaching (Ramia et al., 2023).

## References

- Australian Children's Education and Care Quality Authority. (2017). *Guide to the National Quality Standard*. <https://www.acecqa.gov.au/nqf/about/guide>
- Australian Government Department of Education. (2022). *Belonging, being and becoming: The Early Years Learning Framework for Australia (V2.0)*. Australian Children's Education & Care Quality Authority. <https://www.acecqa.gov.au/nqf/national-law-regulations/approved-learning-frameworks>
- Bonnett, T., & Ly, K. (2017). LEADing the way in early childhood education and care through a mentor/protégé program. *Journal of Childhood Studies*, 42(1), 23–31. <https://doi.org/10.18357/jcs.v42i1.16884>
- Cloney, D., Cleveland, G., Hattie, J., & Tayler, C. (2016). Variations in the availability and quality of early childhood education and care by socioeconomic status of neighborhoods. *Early Education and Development*, 27(3), 384–401, <https://doi.org/10.1080/10409289.2015.1076674>
- Gialamas, A., Mittinty, M. N., Sawyer, M. G., Zubrick, S. R., & Lynch, J. (2015). Social inequalities in childcare quality and their effects on children's development at school entry: Findings from the Longitudinal Study of Australian Children. *Journal of Epidemiology & Community Health*, 69(9), 841–848. <https://doi.org/10.1136/jech-2014-205031>
- Hogan, J., & White, P. (2021). A self-study exploration of early career teacher burnout and the adaptive strategies of experienced teachers. *Australian Journal of Teacher Education*, 46(5), 18–39. <https://doi.org/10.14221/ajte.2021v46n5.2>
- Kagan, S. (2019). The quest for social strategy. In S. L. Kagan (Ed.), *The early advantage 2 – Building systems that work for young children: International insights from innovative early childhood systems* (pp. 1–19). Teachers College Press.
- Kagan, S. L., Melvin, S. A., Landsberg, E., Kumpulainen, K., & Reid, J. (2019). Knowledgeable and supported teachers and families. In S. L. Kagan (Ed.), *The early advantage 2 – Building systems that work for young children*:

*International insights from innovative early childhood systems* (pp. 94–140). Teachers College Press.

Kagan, S. L., Sylva, K., Reid, J. L., & Landsberg, E. (2019). Data to drive improvement. In S. L. Kagan (Ed.), *The early advantage 2 – Building systems that work for young children: International insights from innovative early childhood systems* (pp. 174–214). Teachers College Press.

Lynch, J. (2018, December). *Linked data in action: Supporting service improvement; The value of whole-of-population data linkage: The South Australian Early Childhood Data Project* [Presentation]. Menzies Institute for Medical Research. [https://www.menzies.utas.edu.au/\\_data/assets/pdf\\_file/0006/1226157/John-Lynch-Tasmania-Data-Linkage-Workshop-Dec-2018.pdf](https://www.menzies.utas.edu.au/_data/assets/pdf_file/0006/1226157/John-Lynch-Tasmania-Data-Linkage-Workshop-Dec-2018.pdf)

McConnell, S., & Goldstein, H. (2021). Measurement built for scale: Designing and using measures of intervention and outcome that facilitate scaling up. In J. A. List, D. Suskind & L. H. Supplee (Eds.), *The scale-up effect in early childhood and public policy: Why interventions lose impact at scale and what we can do about it* (pp. 301–329). Taylor & Francis.

Molloy, C., O'Connor, M., Guo, S., Lin, C., Harrop, C., Perini, N., & Goldfeld, S. (2019). Potential of 'stacking' early childhood interventions to reduce inequities in learning outcomes. *Journal of Epidemiology and Community Health*, 73(12), 1078–1086. <https://doi.org/10.1136/jech-2019-212282>

Page, J., Cock, M. L., Murray, L., Eadie, T., Niklas, F., Scull, J., & Sparling, J. (2019). An Abecedarian approach with Aboriginal families and their young children in Australia: Playgroup participation and developmental outcomes. *International Journal of Early Childhood*, 51(2), 233–250. <https://doi.org/10.1007/s13158-019-00246-3>

Pilkington, R., Montgomerie, A., Grant, J., Gialamas, A., Malvaso, C., Smithers, L., Chittleborough, C., & Lynch, J. (2019). An innovative linked data platform to improve the wellbeing of children: The South Australian Early Childhood Data Project. In *Australia's Welfare 2019: Data insights* (Catalogue number AUS 226) (pp. 161–177). Australian Institute of Welfare and Health. <https://www.aihw.gov.au/reports/australias-welfare/australias-welfare-2019-data-insights/report-editions>

Productivity Commission. (2016). *National education evidence base* (No. 80). <https://www.pc.gov.au/inquiries/completed/education-evidence/report>

Ramia, I., Jackson, J., Healy, B., People, J., Ridgeway, K., & Greaves, E. (2023). *Evidence use in the early childhood sector: A national snapshot*. Australian Education Research Organisation. Manuscript in preparation.

Taylor, C., Peachey, T., & Healey, B. (2018). Maintaining the reform momentum in Australia. In S. L. Kagan (Ed.), *The early advantage 1 – Early childhood systems*

*that lead by example: A comparative focus on international early childhood education* (pp. 19–43). Teachers College Press.

Tseng, Y., Jordan, B., Borland, J., Coombs, N. C., Cotter, K., Guillou, M., Hill, A., Kennedy, A., & Sheehan, J. (2019). *Changing the life trajectories of Australia's most vulnerable children: 24 months in the Early Years Education Program: Assessment of the impact on children and their primary caregivers* (Report No. 4). The University of Melbourne.

[https://fbe.unimelb.edu.au/\\_data/assets/pdf\\_file/0003/3085770/EYERP-Report-4-web.pdf](https://fbe.unimelb.edu.au/_data/assets/pdf_file/0003/3085770/EYERP-Report-4-web.pdf)

Togher, M., Fenech, M. (2020). Ongoing quality improvement in the context of the National Quality Framework: Exploring the perspectives of educators in 'Working Towards' services. *Australasian Journal of Early Childhood*, 45(3), 241–253.

<http://dx.doi.org/10.1177/1836939120936003>

Walter, M., Lovett, R., Maher, B., Williamson, B., Prehn, J., Bodkin-Andrews, G., & Lee, V. (2021). Indigenous data sovereignty in the era of big data and open data.

*Australian Journal of Social Issues*, 56(2), 143–156. <https://doi.org/10.1002/ajs4.141>

## Attachment 1: Literature summary

The following literature summary provides a snapshot of recently published Australian evidence (2015–2022) from research on the relationship between ECEC participation and early learning and development outcomes for children from priority cohorts disproportionately experiencing vulnerability and disadvantage. The summary builds on prior work published by the Australian Institute of Health and Welfare (2015), by focusing on recently published research (2015–2022) and extending the scope to include additional priority groups. Unpublished research is not included in this review.

### Aboriginal and/or Torres Strait Islander children

#### Relationship between ECEC participation and outcomes

Aboriginal and Torres Strait Islander children:

- are disproportionately less likely to attend a preschool program before school (Falster et al., 2021; Goldfeld et al., 2016; O'Connor et al., 2020)
- have a higher risk of developmental vulnerability if they do not attend preschool or long day care (Guthridge et al., 2016)
- can benefit from attending centre-based ECEC, with improvements observed in short-term (2 years post-preschool) and long-term (3–5 years post preschool) literacy and reading outcomes, and long-term numeracy and development outcomes (Holzinger & Biddle, 2015)
- have an improved home learning environment at age 4 after attending playgroup at ages 2–3, which is associated with better vocabulary outcomes (Williams et al., 2017)
- benefit developmentally from attending preschool, however, to a lesser degree than their non-Indigenous peers (Falster et al., 2021). This finding suggests other factors outside of ECEC attendance (such as social and health conditions) are equally important for improving outcomes, and lends support to a stacked intervention approach (Molloy et al., 2019).

#### Factors related to impact

Recent studies suggest culturally safe and responsive Abecedarian<sup>1</sup> approaches delivered in family- and community-engaged settings are effective interventions for Aboriginal and Torres Strait Islander children:

- An evaluation of a culturally-adapted Abecedarian intervention (specifically Conversational Reading and LearningGames elements) delivered within remote, Family as First Teachers playgroups indicated better language and development outcomes as intervention dosage increased (Page et al., 2019).

- Other studies have also found promising indications of positive improvements in language skills after attending centres implementing a culturally-adapted Abecedarian approach, however, the sample size of these studies was small (Brookes & Tayler, 2016; Elek et al., 2022).

## Children from low socio-economic status (SES) backgrounds

### Relationship between ECEC participation and outcomes

Children from low-SES backgrounds:

- are less likely to attend preschool than their more advantaged peers (Goldfeld et al., 2016; O'Connor et al., 2020)
- are more likely to be in parental-only care in the years before school entry (Collier et al., 2019)
- are more likely to live in areas with lower availability of ECEC services, with a lower level of quality of care provided in those services (Cloney et al., 2016)
- score lower on baseline tests of language and cognitive ability, compared to children attending ECEC in high-SES areas (Tayler et al., 2015).

### Factors related to impact

- High-quality relationships with carers in long day care/family day care had stronger positive effects on cognitive and behavioural outcomes for children from low-SES families (Gialamas et al., 2015).
- Evidence shows that although preschool attendance and home reading can reduce some of the socio-economic gaps in reading skills at ages 8–9, large gaps persist (Goldfeld et al., 2021).
- This evidence suggests that ECEC participation should be stacked with other child/family/community interventions to address wider social determinants of early learning outcomes (Molloy et al., 2019).

## Children known to child protection/living in out-of-home care

### Relationship between ECEC participation and outcomes

- Children known to child protection/living in out-of-home care:
  - are slightly more likely to have not attended preschool if they had a substantiated case of maltreatment or an out-of-home care episode (Pilkington et al., 2017)

- have higher levels of developmental vulnerability and poorer NAPLAN outcomes as their level of intervention with the child protection system increased (Pilkington et al., 2017)
- Evidence from a small study found children living in foster and kinship care were more likely to attend long day care or family day care, and spend more hours in day care settings compared to their peers (Early Childhood in Foster and Kinship Care Study; Wise, 2018). Earlier analysis of longitudinal data (Australian Institute of Family Studies, 2015) supports this finding.

### **Factors related to impact**

- Experimental evidence has demonstrated that attendance at a targeted, high-quality centre-based ECEC program resulted in improvements in young children's (aged <3 at entry) IQ, resilience and socio-emotional skills at 24 months post-baseline (Tseng et al., 2019). Features of this program included a highly-developed curriculum, high educator/staff ratios and consistency of care, qualified/experienced staff and a staff member with mental health training (Tseng et al., 2019).

## Children from regional/remote areas

### **Relationship between ECEC participation and outcomes**

- Recent published research on ECEC-participation by children living in regional/remote areas in the Australian context is mixed and scarce.
- Research using national government services data indicates that the proportion of children living in regional areas enrolled in a preschool program in the year before school was slightly higher than their representation in the wider community, whereas enrolment was slightly lower for children in remote areas (Steering Committee for the Review of Government Service Provision, 2022). Data on regional/remote participation in other ECEC is less clear.
- Conversely, evidence from large-scale data has indicated that geographical remoteness is not associated with preschool attendance, with the proportion attending preschool around 90% for children living in major cities, regional and remote areas (O'Connor et al., 2020).

### **Factors related to impact**

- Recent published research on effective ECEC programs and interventions for children living in regional/remote areas is scarce. Evidence regarding the ECEC participation of children living in regional/remote areas is mixed or inconclusive and requires more high-quality research before the efficacy of interventions can be explored.

## Children with a disability or developmental delay

### Relationship between ECEC participation and outcomes

- Recent published evidence on ECEC participation for children with a disability or developmental delay is scarce.
- Government services data provides some insight, indicating that in the year before school, children with a disability are underrepresented in preschool enrolments compared to their representation in the wider community (Steering Committee for the Review of Government Service Provision, 2022).
- Evidence further suggests that only 38% of children with special needs/or a disability who are enrolled in preschool are receiving the recommended 15 hours per week, compared to the national average of 46% (Molloy et al., 2021).

### Factors related to impact

- Recent published research regarding effective ECEC programs and interventions for children with a disability or developmental delay is limited. The [Centre for Education Statistics and Evaluation \(2014\)](#) has outlined the benefits of inclusive ECEC for children with a disability. However, contemporary high-quality evidence is required to understand the participation in ECEC by children with a disability or developmental delay, to better inform effective programs and interventions for this priority cohort.
- A recent study examined the factors influencing transitions for children with disabilities into ECEC centres, finding enabling factors for success included professional development and management supports for educators, good educator and parent communication, and relationships with previous service providers (Warren et al., 2016).

## Children from a refugee background

### Relationship between ECEC participation and outcomes

- Recent published research on the participation in ECEC by newly arrived/refugee children in the Australian context is lacking. This review identified one recent qualitative study examining factors related to accessing ECEC for refugee families in Queensland. This study found that most refugee families in the study sample did not participate in ECEC due to a range of limiting factors including: financial barriers, discrimination, language barriers, cultural divergence, and trauma-related factors (Lamb, 2020).

## Factors related to impact

- A program trial aimed at increasing preschool attendance for refugee and asylum seeker children experienced increased enrolment from 0 to 90 families over 2 years following:
  - the delivery of child development programs in community hubs, linking families with ECEC centres
  - increased funding for ECEC places and transport costs
  - trauma-informed practice training for staff (Molloy et al., 2021).

## References

- Australian Institute of Family Studies, Chapin Hall Center for Children University of Chicago, & NSW Department of Family and Community Services. (2015). *Pathways of Care Longitudinal Study: Outcomes of children and young people in out-of-home care in NSW* (Wave 1 Baseline report). <https://aifs.gov.au/research/commissioned-reports/pathways-care-longitudinal-study>
- Australian Institute of Health and Welfare (2015). *Literature review of the impact of early childhood education and care on learning and development*. <https://www.aihw.gov.au/reports/children-youth/learning-development-impact-of-early-childhood-edu/summary>
- Brookes, I., & Tayler, C. (2016). Effects of an evidence-based intervention on the Australian English language development of a vulnerable group of young Aboriginal children. *Australasian Journal of Early Childhood*, 41(4), 4–15. <https://doi.org/10.3316/aeipt.214288>
- Centre for Education Statistics and Evaluation. (2014). *Children with disability in inclusive early childhood education and care*. <https://education.nsw.gov.au/about-us/educational-data/cese/publications/literature-reviews/children-with-disability-inclusive-early-childhood-education-care>
- Cloney, D., Cleveland, G., Hattie, J., & Tayler, C. (2016). Variations in the availability and quality of early childhood education and care by socioeconomic status of neighborhoods. *Early Education and Development*, 27(3), 384–401. <https://doi.org/10.1080/10409289.2015.1076674>
- Collier, L., Gregory, T., Dal Grande, E., & Brinkman, S. (2019). *The Australian Early Childhood Education Development Experience Research Project (AECED): Exploring the association between early childhood education and care pathways and child development outcomes at school entry*. Australian Early Development Census.

<http://aedc.gov.au/websilk/handlers/resourcedocument.ashx?id=f5332964-db9a-6d2b-9fad-ff0000a141dd>

- Elek, C., Gibberd, A., Gubhaju, L., Lennox, J., Highfold, R., Goldfeld, S., & Eades, S. (2022). An opportunity for our little ones: Findings from an evaluation of an Aboriginal early childhood learning centre in central Australia. *Early Childhood Education Journal*, 50(4), 579–591. <https://doi.org/10.1007/s10643-021-01174-5>
- Falster, K., Hanly, M., Edwards, B., Banks, E., Lynch, J. W., Eades, S., Nickel, N., Goldfeld, S., & Biddle, N. (2021). Preschool attendance and developmental outcomes at age five in Indigenous and non-Indigenous children: A population-based cohort study of 100,357 Australian children. *Journal of Epidemiology and Community Health*, 75, 371–379. <https://doi.org/10.1136/jech-2020-214672>
- Gialamas, A., Mittinty, M. N., Sawyer, M. G., Zubrick, S. R., & Lynch, J. (2015). Social inequalities in childcare quality and their effects on children's development at school entry: Findings from the Longitudinal Study of Australian Children. *Journal of Epidemiology & Community Health*, 69(9), 841–848. <https://doi.org/10.1136/jech-2014-205031>
- Goldfeld, S., Moreno-Betancur, M., Guo, S., Mensah, F., O'Connor, E., Gray, S., Chong, S., Woolfenden, S., Williams, K., Kvalsvig, A., Badland, H., Azpitarte, F., & O'Connor, M. (2021). Inequities in children's reading skills: The role of home reading and preschool attendance. *Academic Pediatrics*, 21(6), 1046–1054. <https://doi.org/10.1016/j.acap.2021.04.019>
- Goldfeld, S., O'Connor, E., O'Connor, M., Sayers, M., Moore, T., Kvalsvig, A., & Brinkman, S. (2016). The role of preschool in promoting children's healthy development: Evidence from an Australian population cohort. *Early Childhood Research Quarterly*, 35, 40–48. <https://doi.org/10.1016/j.ecresq.2015.11.001>
- Guthridge, S., Li, L., Silburn, S., Li, S. Q., McKenzie, J., & Lynch, J. (2016). Early influences on developmental outcomes among children at age 5 in Australia's Northern Territory. *Early Childhood Research Quarterly*, 35, 124–134. <https://doi.org/10.1016/j.ecresq.2015.12.008>
- Holzinger, L. A., & Biddle, N. (2015). *The relationship between early childhood education and care (ECEC) and the outcomes of Indigenous children: Evidence from the Longitudinal Study of Indigenous Children (LSIC)*. Australian National University. <https://caepr.cass.anu.edu.au/research/publications/relationship-between-early-childhood-education-and-care-ecec-and-outcomes>
- Lamb, C. S. (2020). Constructing early childhood services as culturally credible trauma-recovery environments: Participatory barriers and enablers for refugee families. *European Early Childhood Education Research Journal*, 28(1), 129–148. <https://doi.org/10.1080/1350293X.2020.1707368>
- Molloy, C., Goldfeld, S., Harrop C., & Perini N. (2021). *Early childhood education: A study of the barriers, facilitators, & strategies to improve participation*.

<https://www.rch.org.au/uploadedFiles/Main/Content/ccch/images/RSTO-CommBrief-PP-Barriers-Faciliators-Strategies-Jan2022.pdf>

- Molloy, C., O'Connor, M., Guo, S., Lin, C., Harrop, C., Perini, N., & Goldfeld, S. (2019). Potential of 'stacking' early childhood interventions to reduce inequities in learning outcomes. *Journal of Epidemiology & Community Health*, 73(12), 1078–1086. <https://doi.org/10.1136/jech-2019-212282>
- Moreno-Betancur, M., Lynch, J., Pilkington, R., Schuch, H., Gialamas, A., Sawyer, M., Chittleborough, C., Schurer, S., & Gurrin, L. (2022). Emulating a target trial of intensive nurse home visiting in the policy-relevant population using linked administrative data. *International Journal of Epidemiology*, 52(1), 119–131. <https://doi.org/10.1093/ije/dyac092>
- O'Connor, M., O'Connor, E., Gray, S., & Goldfeld, S. (2020). Trends in preschool attendance in Australia following major policy reform: Updated evidence six years following a commitment to universal access. *Early Childhood Research Quarterly*, 51(2), 93–99. <https://doi.org/10.1016/j.ecresq.2019.09.002>
- Page, J., Cock, M. L., Murray, L., Eadie, T., Niklas, F., Scull, J., & Sparling J. (2019). An Abecedarian approach with Aboriginal families and their young children in Australia: Playgroup participation and developmental outcomes. *International Journal of Early Childhood*, 51(2), 233–250. <https://doi.org/10.1007/s13158-019-00246-3>
- Pilkington, R., Grant, J., Chittleborough, C., Gialamas, A., Montgomerie, A., & Lynch, J. (2017). *Child protection in South Australia*. BetterStart Child Health and Development Research Group, School of Public Health, The University of Adelaide. <https://health.adelaide.edu.au/betterstart/publications-presentations-reports/reports#research-series>
- Steering Committee for the Review of Government Service Provision. (2022). *Report on government services 2022: B child care, education and training*. Productivity Commission. <https://apo.org.au/node/316124>
- Taylor, C., Cloney, D., & Niklas, F. (2015). A bird in the hand: Understanding the trajectories of development of young children and the need for action to improve outcomes. *Australasian Journal of Early Childhood*, 40(3), 51–60. <https://doi.org/10.1177/183693911504000308>
- Tseng, Y., Jordan, B., Borland, J., Coombs, N. C., Cotter, K., Guillou, M., Hill, A., Kennedy, A., & Sheehan, J. (2019). *Changing the life trajectories of Australia's most vulnerable children: 24 months in the Early Years Education Program: Assessment of the impact on children and their primary caregivers* (Report No. 4). [https://fbe.unimelb.edu.au/\\_data/assets/pdf\\_file/0005/2781248/EYERP-Report-2-web.pdf](https://fbe.unimelb.edu.au/_data/assets/pdf_file/0005/2781248/EYERP-Report-2-web.pdf)

- Warren, J., Vialle, W., & Dixon, R. (2016). Transition of children with disabilities into early childhood education and care centres. *Australasian Journal of Early Childhood*, 41(2), 18–26. <https://doi.org/10.1177/183693911604100204>
- Williams, K. E., Berthelsen, D., Viviani, M., & Nicholson, J. M. (2017). Participation of Australian Aboriginal and Torres Strait Islander families in a parent support programme: Longitudinal associations between playgroup attendance and child, parent and community outcomes: Parenting outcomes of playgroup participation by Indigenous Australians. *Child: Care, Health and Development*, 43(3), 441–450. <https://doi.org/10.1111/cch.12417>
- Wise, S. (2018). Usage and quality of formal child care services experienced by infants and toddlers in foster and kinship care: An Australian study. *International Journal of Early Childhood*, 50(1), 47–65. <https://doi.org/10.1007/s13158-018-0212-1>