

Developmental vulnerability and contact with the child protection system

Findings from the NSW Child Development Study

Snapshot

- All children in the NSW Child Development Study (NSW-CDS) who experienced maltreatment in the first five years of their life were at a heightened risk of developmental vulnerabilities at school entry.
- Children who were first reported to child protection services between 0-18 months old were more likely to have multiple developmental vulnerabilities, relative to children who received their first report after this age.
- Children placed in out-of-home care (OOHC) and those with substantiated risk of significant harm reports were more likely to have multiple developmental vulnerabilities, relative to children with no previous child protection responses.
- Targeted early intervention is needed at the earliest sign of childhood maltreatment to mitigate future developmental difficulties.

Introduction

The early life experiences of children impact their physical, emotional and social development. Exposure to maltreatment during the first five years of a child's life may critically impair their development.

This Evidence to Action Note outlines key findings from the NSW-CDS study, 'Timing of the first report and highest level of child protection response in association with early developmental vulnerabilities in an Australian population cohort'. The Note also discusses the implications of this research for policy and practice.



Why is the timing of child protection reports important to understanding developmental vulnerability?

Identifying markers of developmental vulnerability in maltreated children before they start school allows for earlier intervention. This may reduce the risk for serious and long-term consequences later in life. Current literature suggests that early childhood developmental outcomes might differ among maltreated children according to the level of child protection response.¹ For example, children reported to child protection services and placed in OOHC may be at increased risk of developmental vulnerabilities at school entry, relative to other children reported to child protection services who remain in their family home. Further, children in OOHC will likely have complex health needs into adulthood.^{2,3,4}

The timing of a child's first report is also important. A previous NSW-CDS study published by Green et al⁵ suggested there was a greater likelihood of developmental vulnerability on multiple early childhood development domains when the first *substantiated* report occurred after 3 years of age. However, a recent study from Western Australia, with access to data on both substantiated and unsubstantiated reports, found that children with earlier reported maltreatment (i.e. in infancy) had significantly higher odds of developmental vulnerability at school entry.⁶ Research published by Rossen et al⁷ sought to replicate the WA study with new access to all levels of child protection reports that were previously unavailable to the NSW-CDS.

The NSW Child Development Study

The [NSW-CDS](#) is a longitudinal study of the mental health and wellbeing of a cohort of NSW children. These children were assessed using the Australian Early Development Census (AEDC) when they commenced their first year of formal schooling in 2009.

The NSW-CDS combines children's AEDC records with birth, health, education, justice and child protection records from birth to 13-14 years. It also includes the parental records for a subcohort of children in the study who were born in NSW.

What is the Australian Early Development Census?

The AEDC measures the early childhood development of children in Australia in their first year of full-time school. It measures this across five domains including:

- Physical health and wellbeing
- Social competence
- Emotional maturity
- Language and cognitive skills (school-based)
- Communication skills and general knowledge

Teachers complete an assessment for kindergarten children across the five domains. These domains have been shown to predict later health, education and social outcomes.

Children are deemed 'developmentally vulnerable' if they score below the 10th percentile of the national population, determined using cut-off scores established in 2009.

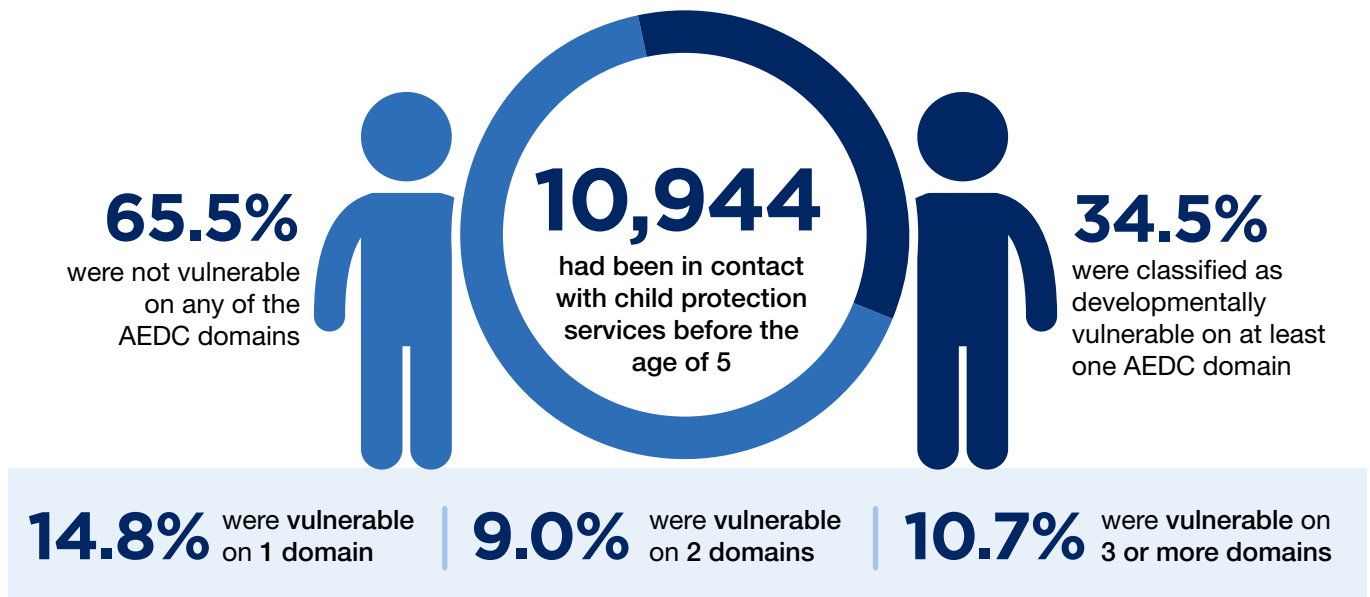
These children demonstrate a much lower than average ability in the developmental competencies in that domain.

More information about each of the AEDC domains and whether children are developmentally 'vulnerable', 'at risk' or 'on track' can be found here: [About the AEDC Domains](#).

What did the study find?

The NSW-CDS used linked data for 67,027 NSW children and their parents to examine associations between developmental vulnerability at 5 years of age (as measured by the AEDC) and the timing and level of the first child protection report.

Of the children in the study, 10,944 had been in contact with child protection services (that is, reported to the NSW Government or placed in out-of-home care) before the age of five. One third (34.5%) of these children were classified as developmentally vulnerable on at least one AEDC domain.



Children with a child protection report before 18 months old were most developmentally vulnerable

The researchers looked at associations between the timing of a child protection report and developmental vulnerability on the AEDC. They adjusted for the influence of other potential risk factors, including the child's gender, English as a second language, socio-economic disadvantage, maternal smoking during pregnancy, premature birth, maternal age at birth, and parental mental health.

Of the children known to child protection services before the age of 5 years:

- 39% had their first report before 18 months of age
- 23% had their first report between 19-36 months of age
- 38% had their first report at or after 37 months of age

Children who had their first child protection report between 0-18 months were most likely to be developmentally vulnerable on more than one development domain, relative to non-maltreated children.

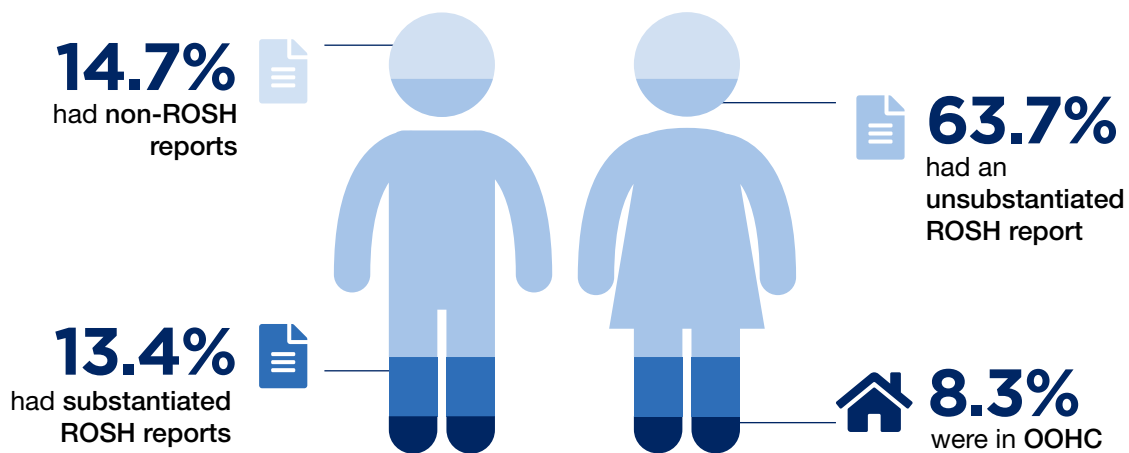
Children in OOHC or with a substantiated ROSH report were most developmentally vulnerable

The researchers allocated the children known to child protection services before they were 5 years old to subgroups, based on the highest level of child protection response they received. The four levels of child protection response were:



These subgroups are mutually exclusive. For example, if a child had a recorded OOHC placement and a substantiated risk of significant harm (ROSH) report, they were placed in the OOHC group.

Of children known to child protection services before they were 5 years old, nearly 8.3% were in OOHC, 13.4% had substantiated ROSH reports and 63.7% had unsubstantiated ROSH reports*.



The researchers examined associations between the level of child protection response and developmental vulnerability on the AEDC (see Figure 1).

Children with any child protection response were significantly more likely to be vulnerable on one or more of the AEDC domains, compared to non-maltreated children.

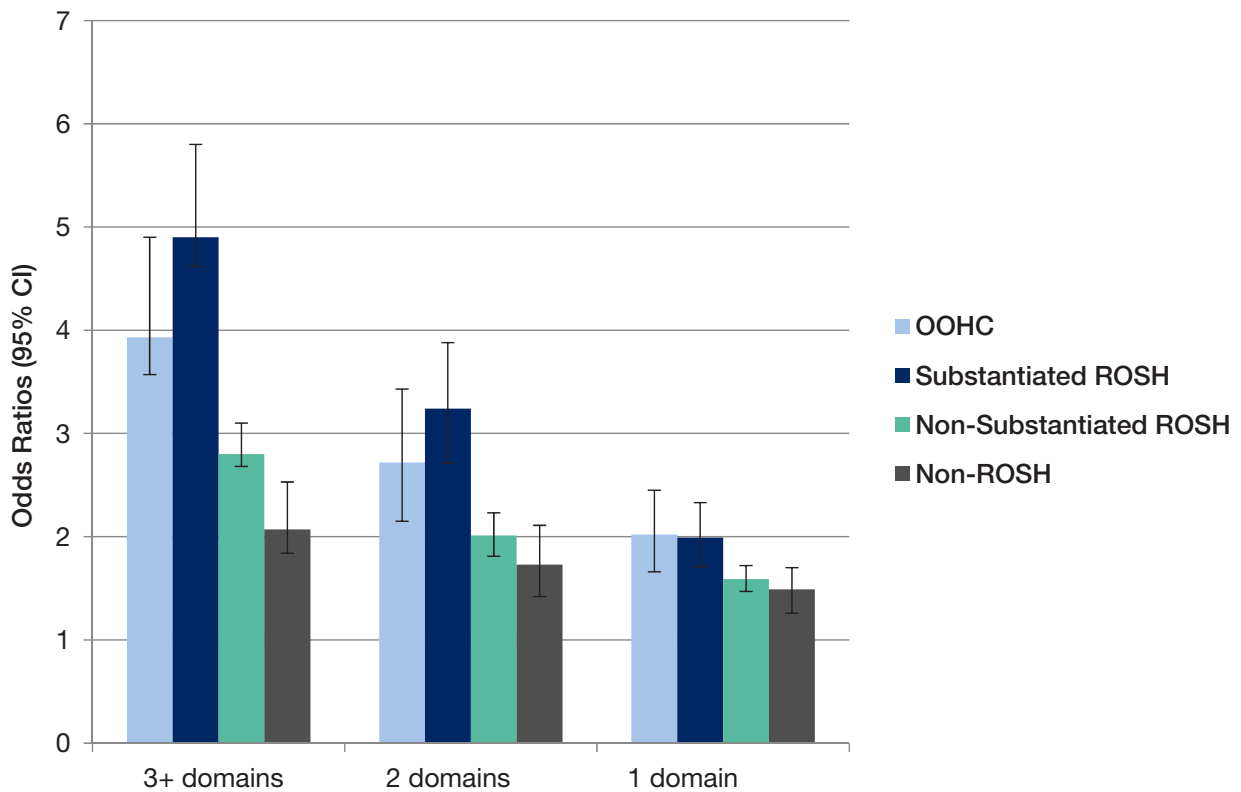
As shown in Figure 1, children with an OOHC placement or a substantiated ROSH report showed the greatest likelihood of being developmentally vulnerable on multiple AEDC domains. For example, children in the substantiated ROSH report group were nearly five times more likely to show developmental vulnerability on three or more developmental domains, compared to non-maltreated children. Children in the OOHC group were nearly four times more likely to show developmental vulnerability on three or more developmental domains, compared to non-maltreated children.

Children in the substantiated ROSH report and OOHC groups were also around three times more likely to show developmental vulnerability on two or more AEDC domains, compared to non-maltreated children.

Children with non-ROSH reports were the least likely to be developmentally vulnerable on the AEDC domains. However, they were still twice as likely to show developmental vulnerabilities on three or more AEDC domains, compared to children with no previous child protection contacts.

* The high number of unsubstantiated reports could be a result of children not meeting the threshold. However, it could also reflect resource constraints that limit the number of reports that can be followed up.

Figure 1. Developmental vulnerability on AEDC domains based on level of child protection response.



Note: An odds ratio (OR) is a measure of association between an exposure and an outcome. In this figure, the OR is a measure of association between the level of child protection response (exposure) and AEDC developmental vulnerabilities (outcome). The OR represents the odds that AEDC developmental vulnerabilities will occur given a particular exposure (i.e., child protection response), compared to the odds they will occur in the absence of that exposure (i.e., child protection response).

If the AEDC developmental vulnerabilities are the same in both groups the OR will be 1, which means there is no difference between the groups who were exposed to different levels of child protection service. If the OR is greater than 1, then the exposed group is more likely to show developmental vulnerabilities.

Source: Rossen et al. 2019, ‘Timing of the first report and highest level of child protection response in association with early developmental vulnerabilities in an Australian population cohort’, *Child Abuse & Neglect*, vol. 93, pp. 1-12.

What does this mean for policy and practice?

Maltreated children, no matter the level of involvement with child protection services, showed heightened risk of developmental vulnerabilities across all AEDC domains at school entry, compared to their non-maltreated peers. Children reported to child protection services between 0-18 months old and children with the highest levels of child protection response (those placed in OOHC or with a substantiated ROSH report) were more likely to be vulnerable on multiple developmental domains at school entry.

NSW Government and other agencies have an important role to play in mitigating developmental difficulties during the early childhood years. A whole of government service system response that delivers coordinated and evidence-based supports for children and families who have multiple and complex problems is needed.

The early identification of markers of developmental vulnerability in maltreated children, *before* they start school, would offer a critical opportunity to prevent and mitigate the impact of child abuse and neglect. This, in turn, may reduce the risk of later serious and long-term consequences.

Additional investment is needed in early intervention approaches that identify and support families and children at risk of coming into contact with the child protection system. Local practitioners and service providers that at risk families may come into contact with (e.g. supported playgroups, early childhood carers, general practitioners and paediatricians, midwives and obstetricians) need to be better supported to identify at risk families and support them to access services that will better enable them to keep their children safe and healthy.

This early intervention approach should also incorporate greater community and family empowerment in decision-making. The [Aboriginal Case Management Policy](#) (ACMP), for example, has introduced Aboriginal Family-led Decision Making which focuses on family engagement and participation, empowering families to build a network of care around a child. The participation of Aboriginal families, extended families, communities and representative organisations is important to making informed decisions in the best interests of Aboriginal children and young people, and reflects the interests of Aboriginal families and communities in the safety, welfare and wellbeing of Aboriginal children.

Updating previous research

The finding that children who receive their first report between 0-18 months old show the greatest likelihood of developmental vulnerability is different to the previous findings reported by the NSW-CDS. Those findings showed a greater likelihood of developmental vulnerability when the first substantiated report occurred at 37 months.^{8,9}

It is important to discuss why these findings are different. The findings reported in this Evidence to Action Note analysed data from NSW-CDS Wave 2, which included information about substantiated and unsubstantiated child protection reports. In contrast, the previous research used NSW-CDS Wave 1 data that was limited to substantiated child protection reports and OOHC placements only. These new findings highlight the importance of having broad and accurate information about how vulnerable children and families interact with the child protection system.

About the NSW Child Development Study

The [NSW-CDS](#) is a longitudinal study of the mental health and wellbeing of a cohort of NSW children who started kindergarten in 2009. It aims to obtain good quality information about the development of these children to map patterns of resilience and vulnerability for later mental health, education, work, and other outcomes. The NSW-CDS will follow these children from birth into early adulthood via successive waves of record linkage.

Wave 1 record linkage provided information about the early childhood years (from birth to 5 years) for children who were assessed with the Australian Early Development Census (AEDC) in 2009. Wave 1 linked the children's AEDC records with their birth, health, education and child protection data. It also linked the health, crime and mortality data for the parents of a subcohort of children whose births were registered in NSW. The child cohort comprised 99.7% of NSW children who started kindergarten in 2009.

Wave 2 builds on Wave 1 by incorporating data from the Middle Childhood Survey (MCS), conducted in 2015. The MCS examined the mental health and wellbeing of a subcohort of the same children (now aged 11-12 years) who were assessed with AEDC in 2009.

Wave 3 is proposed for completion in 2020. In addition to expanding the longitudinal data to adolescence, this record linkage will add Commonwealth data sets (e.g., Medicare records for GP visits).

Future waves of record linkage are planned for key developmental stages into adulthood. See [Record Linkage in NSW-CDS](#) for more information.

The original research

For more information about the original research you can contact the CDS here:

<http://nsw-cds.com.au/contact-us>

The original research paper is:

Rossen, L, Tzoumakis, S, Kariuki, M, Laurens, K, Butler, M, Chilvers, M, Harris, F, Carr, V, & Green, M, 2019, 'Timing of the first report and highest level of child protection response in association with early developmental vulnerabilities in an Australian population cohort', *Child Abuse & Neglect*, vol. 93, pp. 1-12.

Produced by

Kathleen Blair and Oishee Alam

Evaluation, Evidence and Research

FACS Insights, Analysis and Research (FACSIAR)

NSW Department of Communities and Justice

320 Liverpool Rd, Ashfield NSW 2131

www.facs.nsw.gov.au

Email: facsiar@facs.nsw.gov.au

Acknowledgements

This research was conducted by the University of New South Wales, Australia with financial support from the Australian Research Council (Linkage Project LP110100150, with the New South Wales (NSW) Ministry of Health, NSW Department of Education, and the NSW Department of Family and Community Services representing the Linkage Project Partners); the National Health and Medical Research Council (NHMRC; Project Grants APP1058652 and APP114055 and NHMRC Partnership Project APP1133833); and the Australian Rotary Health (Mental Health of Young Australians Research Grants 104090 and 162302).

This research used population data owned by the NSW Department of Education; NSW Education Standards Authority; NSW Department of Family and Community Services; NSW Ministry of Health; NSW Registry of Births, Deaths and Marriages; the Australian Coordinating Registry (on behalf of Australian Registries of Births, Deaths and Marriages, Australian Coroners and the National Coronial Information System); the Australian Bureau of Statistics; the NSW Bureau of Crime Statistics and Research, and; NSW Police. The Australian Early Development Census is funded by the Australian Government Department of Education, Skills and Employment. The findings and views reported are those of the author/s and should not be attributed to these Departments or the NSW and Australian Government. The record linkage was conducted by the Centre for Health and Record Linkage.

Endnotes

- ¹ Litrownik, AJ, Lau, A, English, DJ, Briggs, E, Newton, RR, Romney, S, & Dubowitz, H 2005, 'Measuring the severity of child maltreatment', *Child Abuse & Neglect*, vol. 29, no. 5, pp. 553–573.
- ² Kessler, RC, McLaughlin, KA, Green, JG, Gruber, MJ, Sampson, NA, Zaslavsky, AM, & Williams, DR 2010, 'Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys', *The British Journal of Psychiatry*, vol. 197, no. 5, pp. 378–385.
- ³ Randsalu, LS, & Laurell, L 2018, 'Children in out-of-home care are at high risk of somatic, dental and mental ill health', *Acta Paediatrica*, vol. 107, no. 2, pp. 301–306.
- ⁴ Rogosch, FA, Dackis, MN, & Cicchetti, D 2011, 'Child maltreatment and allostatic load: Consequences for physical and mental health in children from low-income families', *Development and Psychopathology*, vol. 23, no. 4, pp. 1107–1124.
- ⁵ Green, MJ, Harris, F, Laurens, KR, Kariuki, M, Tzoumakis, S, Dean, K, & Carr, VJ 2018, 'Cohort profile: The New South Wales Child Development Study (NSW-CDS) – Wave 2 (child age 13 years)', *International Journal of Epidemiology*, vol. 47, no. 5, pp. 1396–1397.
- ⁶ Bell, MF, Bayliss, DM, Glaurt, R & Ohan, JL 2018, 'School readiness of maltreated children: Associations of timing, type, and chronicity of maltreatment', *Child Abuse and Neglect*, vol 76, pp. 426-439.
- ⁷ Rossen, L, Tzoumakis, S, Kariuki, M, Laurens, K, Butler, M, Chilvers, M, Harris, F, & Carr, V 2019, 'Timing of the first report and highest level of child protection response in association with early developmental vulnerabilities in an Australian population cohort', *Child Abuse & Neglect*, vol. 93, pp. 1-12.
- ⁸ Green, MJ, Tzoumakis, S, McIntyre, B, Kariuki, M, Laurens, KR, Dean, K, Chilvers, M, Harris, F, Butler, M, Brinkman, SA, & Carr, VJ 2018, 'Childhood maltreatment and early developmental vulnerabilities at age 5 years', *Child Development*, vol. 89, no. 5, pp. 1599-1612.
- ⁹ FACS Insights, Analysis and Research 2018, 'Child maltreatment in early childhood: Developmental vulnerability on the AEDC', Available at: <https://www.facs.nsw.gov.au/download?file=547460>