Lifetime risk of child protection system involvement in South Australia for Aboriginal and non-Aboriginal children, 1986–2017 using linked administrative data

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ABSTRACT

Background: Child protection services exist to reduce potential harms from child maltreatment. Many jurisdictions produce annual data on child protection system (CPS) involvement, leaving a gap in knowledge of lifetime involvement.

Objective: To describe lifetime involvement in CPS, by type of contact.

Participants: All 608,547 children born in South Australia (SA), Australia between 1986 and 2017.

Methods: A retrospective cohort design using linked administrative data to report cumulative incidence of CPS involvement from birth to age < 18 (or June 30, 2017) by Aboriginal status. CPS involvement was categorised into notifications (3 levels), investigations, substantiations and out-of-home care (OOHC). Cumulative incidence curves were derived for 5 birth cohorts.

Results: Across childhood (to age < 18 years), substantiated maltreatment was experienced by 3.2–3.6% of non-Aboriginal and 19–25% of Aboriginal children, 7 times reported annual substantiation rates. For most CPS categories CPS involvement increased until 2010, and was occurring earlier in life. By age 3, 0.5% of non-Aboriginal and 4.5% of Aboriginal children born 1986–1991 were the subject of a substantiation compared with 1.9% and 15% of non-Aboriginal and Aboriginal children, respectively, born 2010–2017. Incidence rates beyond age 3 were similar. OOHC contact was similar across cohorts, with 1.5% of non-Aboriginal and 12.7% of Aboriginal children ever-placed in care.

Conclusions: Data linkage is an essential tool for understanding life course involvement with the CPS and describing trends not observable from annual snapshots. Such information is critical for burden of disease estimates, informing policy and monitoring CPS performance.

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1. Introduction

Child maltreatment results in a significant burden of disease, impacting on mental and physical health, with associated disability, loss of quality of life and premature death. Child maltreatment also has negative social consequences, including poor school engagement and educational attainment, high involvement in crime, welfare dependency, child protection system (CPS) involvement, family violence and homelessness (Fry, McCoy, & Swales, 2012; Gilbert et al., 2009; Institute of Medicine (IOM) and National Research Council (NRC) (2014); Widom, 2014). Significant economic costs are attributed to these outcomes. Cost of child maltreatment in the USA was estimated at US$124 billion in 2008, incorporating considerable lost production (Fang, Brown, Florence, & Mercy, 2012). In Australia, cost to government has been estimated at over AU$9 billion (lifetime costs of incident cases in 2012–13) with a further AU$17.4 billion in loss of quality-of-life and premature death (McCarthy et al., 2016).

Governments across the world have established CPS services to protect children from familial abuse and neglect. Their remit is to receive notifications of concern, identify children at risk of serious harm, and implement a suitable response, which could include referral to family support or other community-based services, allocation of a CPS case worker, or in circumstances of immediate or on-going high-level threat, removal of a child for placement in out-of-home care (OOHC). Child protection services may also have a role to care for children at risk, when no one else is available (for example, when a sole parent is hospitalised and other family cannot be located to care for the child).

Many jurisdictions report involvement in the CPS on an annual basis (Australian Institute of Health and Welfare (AIHW) (2018); Children & Families Directorate, 2018; Productivity Commission, 1998; U.S. Department of Health & Human Services, 2019). Annual data provide valuable information on current events, such as notifications, investigations, substantiations, children entering or in OOHC and the annual cost of running the CPS. From these reports we know, for instance, that in the 2016–17 financial year, 233,795 Australian children, 4.3% of children aged 0–17 years, were the subject of a child maltreatment notification and 0.9% of a substantiated investigation (Productivity Commission, 2018).

Studies consistently find that children from disadvantaged groups experience greater involvement in the CPS (Ards, Myers, Malkis, Sugrue, & Zhou, 2003; Barker, Alfred, & Kerr, 2014; Productivity Commission, 2018), related to high prevalence of multiple adversity and histories of trauma – risk factors for child maltreatment (Amos, Furber, & Segal, 2011; Amos, Segal, & Cantor, 2014; Doidge, Higgins, Higgins et al., 2017; Doidge, Higgins, Delfabbro, & Segal, 2017; Segal, Doidge, & Amos, 2011). Children living in the most disadvantaged socio-economic quintile in South Australia had an estimated 7 times the risk of experiencing a substantiated case of child abuse or neglect compared to children living in the most advantaged quintile (Public Health Information Development Unit, 2004). Aboriginal Australians, given high levels of disadvantage across social, health and economic domains (Productivity Commission, 2016), reflective of a history of oppression, misappropriation of traditional lands and institutionalised racism, also experience high rates of CPS involvement (Delfabbro, Hirte, Rogers, & Wilson, 2010). In 2016–17, Aboriginal children were nearly 7 times as likely to be the subject of a substantiated investigation as non-Aboriginal children (Productivity Commission, 2018).

In Australia, annual expenditure on the CPS has been increasing since the mid-1990s, with costs notably escalating over the last decade. Between 2008–09 and 2017–18, Australian CPS costs increased by 75% (from AU$2,996 million to AU$5,311 million, 2017–18 dollars) (Productivity Commission, 2018). Over the same period, South Australia (SA) recorded a near trebling of expenditure on child protection services (from AU$174 million to AU$503 million), driven by a large increase in OOHC costs (from AU$120 million to AU$425 million) (Productivity Commission, 2018).

Annual data by its nature cannot provide a full picture of what is happening. What might be driving recent cost escalations? What does engagement with the CPS look like across childhood? How is this changing over time? Is child maltreatment and CPS involvement increasing as a public health issue? Deeper knowledge based on data across the entirety of childhood is necessary to answer these questions. In the absence of this data, estimates of child maltreatment burden rely on modelling from annual data and surveys of limited reliability. Life-time prevalence data are central to improving the quality of burden-of-disease estimates, assessing the performance of the CPS and determining desirable policy responses.

Few studies have investigated the cumulative incidence of CPS involvement across childhood. A New Zealand study using linked administrative data followed a cohort of children born in 1998 to age 18, reporting that almost 1 in 4 children had been the subject of a CPS notification, 9.7% a substantiation and 3.1% had been placed in OOHC (Rouland & Vaithianathan, 2018). A US study estimated 37.4% of all children experience a CPS investigation and 11.8% a substantiation, modelling from 11 years of data for a single cohort (Kim, Wildeman, Jonson-Reid, & Drake, 2017). A Western Australian study, using linked administrative data, followed a cohort of children born in 1990 or 1991 to age 18, reporting that 13.3% of children had ever been the subject of a notification and 3.8% the subject of a substantiated investigation (Bilson, Cant, Harries, & Thorpe, 2015).

The only study we are aware of to have explored cumulative incidence across cohorts is a South Australian study (Delfabbro et al., 2010), comparing notification rates in children born in 1991 (to age 16 years), with a 1998 birth cohort (to 9 years) and a 2002 cohort (to 5 years). This study (2010) found a large increase in the proportion of children who were the subject of a CPS notification across the three cohorts. Results were reported separately for Aboriginal and non-Aboriginal children, but the authors note that the identification of Aboriginal status was unreliable.

A comprehensive description of cumulative incidence is now needed. This paper will address the following research questions. Has the increase in the proportion of children who were the subject of a CPS notification to age 5 observed by Delfabbro et al. (2010) continued? What does the pattern look like across childhood? Is the pattern of involvement for other CPS categories similar to that for notifications? Have changes over time been similar for Aboriginal and non-Aboriginal children? What is the relationship between CPS involvement and socioeconomic status across different CPS categories?

The establishment of a data linkage unit in SA in 2009 provided an opportunity to address these questions and expand knowledge.
of CPS involvement using linked administrative records. Our study aims were to describe CPS involvement across childhood (birth to child’s 18th birthday), for all types of CPS involvement for all children born in South Australia (SA) from 1986 to 2017 and compare patterns across birth cohorts for Aboriginal and non-Aboriginal children.

2. Method

2.1. Study design and population

The study used a retrospective cohort design, including all children live-born in SA between 1 January 1986 and 30 June 2017, drawing on linked SA administrative datasets facilitated by SA-NT DataLink. The cohort consisted of 608,547 children identified from the SA Birth Registry (births registered by a family member) or the SA Perinatal Statistics Collection (all birth outcomes in SA reported by midwives) (Scott and Chan, 2006). The study forms part of a broader research program exploring the relationship between different levels of CPS involvement and health and social outcomes.

2.2. Data / data linkage

SA-NT DataLink is an independent organisation established to link administrative data in SA and the Northern Territory (NT). SA-NT DataLink uses a combination of probabilistic algorithms and detailed clerical review, drawing on information from multiple datasets to assign a unique project specific linkage key (PSLK) to each child in the study cohort. The PSLKs are sent to pertinent data custodians for extraction of approved data items for the study cohort. The study team receive only de-identified data with a unique PSLK for each child, allowing the study team to combine records across datasets, while maintaining anonymity of participants. The quality of matching is continually checked and updated as more datasets become available to SA-NT DataLink.

Datasets used for this study were the Birth Registry (1 January 1986 to 30 June 2017) and the Perinatal statistics collection (1 January 1986 to 31 December 2016) to define the study cohort, the SA Department for Child Protection (DCP) data (see below) to describe CPS involvement, hospital in-patient and Emergency Department attendance and SA Schools Census to ascertain Aboriginal status (with DCP data and Birth Registry), and SA Death Registry to adjust the denominator for censoring in cumulative incidence calculations.

The DCP datasets covered all child maltreatment notifications, investigations and investigation outcomes between 1 January 1986 and 30 June 2017 and all OOHC placements for the period 1 January 1990 to 30 June 2017. Data items included date of notification, screening outcome (see Box ), action required (investigation or not), investigation start date and outcome (substantiation/not substantiated/no outcome possible), and OOHC placement start date. Aboriginal status was determined using a multi-stage median algorithm that draws on all available datasets, as recommended by Christensen et al. (2014).

Ethics approval for the study was obtained from the SA Health Human Research Ethics Committee (HREC14SAH28), the

**Box 1**

DCP SA Notification Screening Outcome Categories - Brief Description.

<table>
<thead>
<tr>
<th>Screened in notifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CP Matter (Familial). A notification is screened in for response if it relates to a matter deemed as a possible case of serious physical, sexual or emotional abuse or chronic neglect, likely to cause serious harm, where the perpetrator is the child’s parent or caregiver (and the situation does not fit the grounds for screening out as described below).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grounds for screening out notifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Notifier Only Concern (NOC)—the notification is insufficient or vague, the notifier lacks credibility, or the notification does not meet the threshold definition of abuse or neglect.</td>
</tr>
<tr>
<td>• Adolescent at Risk (AAR)—the notification identifies an adolescent at risk of harm from their own behaviour or a set of circumstances, such as homelessness, drugs or alcohol use, family conflict, self-harm or suicidal ideation.</td>
</tr>
<tr>
<td>• No Grounds for Intervention (NGI)—the concern meets the child abuse/neglect threshold, but there is no need for the CP agency to respond because the event is historical, another agency is addressing the matter, or the perpetrator no longer has contact with the child and the caregiver is protective. The child must be safe from further harm.</td>
</tr>
<tr>
<td>• Divert Notifier Action (DNA)—the concern meets the definitional threshold, but the notifier has agreed to intervene with the family to address the protective issues/concerns.</td>
</tr>
<tr>
<td>• Extra-familial Cases (EXF)—the alleged perpetrator is not the child’s parent or carer. Practitioners must consider whether there are intra-familial concerns related to a failure of the caregiver to protect the child. EXF matters are referred to the police.</td>
</tr>
<tr>
<td>• Report on Unborn (ROU)—an identified high risk to an unborn child, mother &gt; 34 weeks’ gestation.</td>
</tr>
</tbody>
</table>

AAR and ROU matters may be referred to other agencies. Screened-out notifications do not generally receive any response from the CPS.  
(Drawn from Nyland, 2016)
described in Box 1. For our analysis, notifications were divided into 3 categories: i) Notifier Only Concern (NOC) - indicating low risk personnel are mandated reporters, with penalties for failure to notify. CP notifications are screened into one of seven categories from or is at risk of experiencing serious harm, injury, or chronic neglect from family. In SA, a wide group of human services

4. Involvement with CPS - definitions

A child protection (CP) notification is recorded by the DCP when a member of the community, such as a health professional, teacher/child care worker, police, neighbours or a relative makes a report about a child who they have reason to believe has suffered from or is at risk of experiencing serious harm, injury, or chronic neglect from family. In SA, a wide group of human services personnel are mandated reporters, with penalties for failure to notify. CP notifications are screened into one of seven categories described in Box 1. For our analysis, notifications were divided into 3 categories: i) Notifier Only Concern (NOC) - indicating low risk of serious harm or inadequate information (introduced in 1991); ii) Child Protection Matters familial (CPM) - high suspicion of a child at risk of serious maltreatment (classed as 'screened-in') and the only notification category that can proceed to formal investigation and possible substantiation; and iii) all other notification types - comprising Adolescent at Risk (AAR), CP Matter Extra-familial, Divert Notifier Action, No Grounds for Intervention and Report On Unborn (ROU). Though all these categories may involve high suspicion of harm, they are 'screened out', and would not proceed to a DCP investigation. They could, however, still enter OOHC via a court order - not uncommon for AAR or ROU.

A CP investigation occurs for most ‘screened in’ cases to establish whether neglect or abuse reports are substantiated and to determine a preferred response.

A CP substantiation is the investigation outcome where it is concluded that a child has been (or is likely to be) the subject of serious abuse or neglect by a parent/caregiver that will/has caused serious harm, reaching CP thresholds and that a CPS intervention is required. The response could include direct supervision/support by the DCP, referral to family support/other services, an application to the Courts for a protection order, or removal of the child and placement in OOHC (Productivity Commission, 2018). The services a child or family receives may be minimal or intensive; (this could not be established from the administrative data).

Placement in OOHC occurs when DCP assesses that leaving the child with their family poses an unacceptable risk, or where there are no alternative care options for a child at risk. A period in OOHC can range from overnight to long-term placement from infancy to 18 years of age (occasionally post 18). A child can be placed in kinship care (with relatives other than parents) or non-relative foster care, both of which attract scheduled government payments to meet child-related costs, in residential care/group home, or commercial care. Placement occurs under an appropriate Court order (with few exceptions). Children may be placed under a temporary order (while gathering additional data), under Guardianship of the Minister (typically for 12 months or to age 18), or under a diverse set of other orders, including parent/guardian authorisation – to cover short term situations where a parent simply cannot look after a child/a child has no-one to care for them (for example in an emergency hospitalisation scenario, an adolescent sleeping rough or self-harming (AAR), or a severely disabled child). OOHC most commonly occurs through the investigation and substantiation pathway, as a response to child abuse or neglect; but can occur through the describe alternative pathway.

4.1. Data analysis

Cumulative incidence curves were derived to describe involvement with the CPS. Cumulative incidence at time ‘t’ was calculated as the percentage of children ever involved with the CPS by time ‘t’ (measured from birth) reported separately for the six CPS categories. It is calculated as one minus the Kaplan-Meier estimator, adjusting the denominator continuously (daily) for the number of children surviving until that age. Measurement was censored at age 18 or at the end of data coverage (30 June 2017).

Cumulative incidence curves were plotted and expressed as percentages for five birth cohorts: Cohort 1, children born between 1 January 1986 and 31 December 1991; Cohort 2, born 1 January 1992 to 31 December 1997; Cohort 3, born 1 January 1998 to 31 December 2003; Cohort 4, born 1 January 2004 to 31 December 2009; and Cohort 5, born 1 January 2010 to 30 June 2017. Figures were prepared for each of the six categories of CPS involvement containing plots for each of the five cohorts, to highlight changes over time and across childhood in the proportion of children ever-involved with the CPS. Separate cumulative incidence curves were developed for non-Aboriginal and Aboriginal children, to observe whether the pattern of involvement with the CPS across childhood, or over time, differed between these populations. As placement data were only available from 1990 and NOC was only introduced in 1991, the figures for OOHC and NOC exclude the first cohort.

The incidence of children in the most and least disadvantaged SES quintiles (as described above) who were ever-involved in the CPS by our study categories were described, stratified by Aboriginal status. Relative risks (between the least and the most
disadvantaged quintiles) and 95% confidence intervals were estimated.

All analyses were performed using STATA statistical package version 12.0 (Stata Corporation, College Station, TX, USA).

5. Results

Each birth cohort had between 108,208 and 151,137 children (Table 1). Children identified as Aboriginal made up 4.2% of the entire cohort, increasing from 3.0% of children born 1986–1991 to 4.8% of children born 2004–2017. Cumulative incidence is reported in Figs. 1–6 (A and B, for non-Aboriginal and Aboriginal children, respectively), from birth up to age 18 years. The number of children with CPS involvement, by type of contact and basic cohort demographics are reported in Table 1. There is complete information for the two oldest cohorts (given 18 years of data) and near complete for the 1998–2003 cohort, but data is quite incomplete for the two youngest cohorts.

The percentage of children who had been the subject of a notifier only concern (NOC), as their first notification increased across successive birth cohorts (Fig. 1A and B). By six years of age, in the 1992–1997 cohort, 2.3% of non-Aboriginal and 7% of Aboriginal children had received an NOC as their first notification, increasing to 8.5% of non-Aboriginal and 24% of Aboriginal children in the 2010–2017 cohort.

The cumulative incidence of children who had received a screened-out ‘other’ type of notification as their first notification (Figs. 2A and B) increased across successive cohorts, except for the youngest. The sharp increase in incidence of other notifications, between age 12 and age 18 reflects the AAR group having CPS contact for the first time.

The percentage of children who were ever the subject of a CPM notification (screened in) increased steadily across childhood (Fig. 3A and B). Successive cohorts showed higher rates of involvement earlier in life. For example, for the cohort born 1986–1991, 1% of non-Aboriginal children had been the subject of a CPM notification by two years of age, compared with 5.5% of children born since 2010. A similar pattern is observed for Aboriginal children, with 5.5% of children in the 1986–1991 cohort having ever had a CPM notification by two years of age, increasing to 34% of the cohort born 2010 to June 2017. Across childhood, to age 18, children

![Fig. 1. A & 1B. Cumulative incidence of a NOC as the first CP notification for non-Aboriginal and Aboriginal children.](image-url)
ever the subject of a CPM notification increased from 9.5% to 15% of non-Aboriginal children between the 1986–1991 and 1998–2003 cohorts, and from 40% to 55% of Aboriginal children between the same cohorts. The cumulative incidence curve for the youngest cohort suggests this increase over time has stopped and may be reversing.

Children’s first experience of a CPS investigation (Fig. 4A and B) has also been occurring earlier in childhood. By age 18, in the oldest three cohorts, some 7% of non-Aboriginal children had been the subject of an investigation and 30–40% of Aboriginal children. Children born more recently had a lower rate of investigation (to age 6), suggesting a lower likelihood of ever being the subject of an investigation.

The age of first CPS substantiation (Fig. 5A and B) has, similar to other contact types, been occurring earlier in childhood. For example, the percentage of children who were the subject of a substantiation by age 3 has increased steadily across all birth cohorts from 0.5% in the oldest cohort to 1.9% of the youngest cohort of non-Aboriginal children and from 4.5% to 15% of Aboriginal children. By age 18, in the oldest three cohorts, 3.5% to 4% of non-Aboriginal children and 19% to 25% of Aboriginal children had been the subject of substantiated maltreatment.

The percentage of children ever placed in OOHC was similar across the four birth cohorts. By age 18, some 13% of Aboriginal children had had some experience of OOHC (Fig. 6B), while for non-Aboriginal children, the oldest cohort had the highest likelihood of ever entering OOHC, at 1.7% (Fig. 6A).
Over time, fewer children who were the subject of a CPM notification were investigated for possible maltreatment (falling from 81% in the oldest cohort to 49% of the 1998–2003 cohort in non-Aboriginal children). However, the proportion of children who were the subject of an investigation which was substantiated had increased slightly across the cohorts for both Aboriginal and non-Aboriginal children. Children who had experienced OOHC with a prior (or up to 4 months post) substantiation has been increasing, with the alternate pathway (not via a prior substantiation) becoming less common.

CPS involvement by socioeconomic status, comparing the least and most disadvantaged quintiles, is reported in Table 2. Non-Aboriginal children in the most disadvantaged quintile had several times the risk of CPS involvement compared with children in the least disadvantaged quintile, with the relative risk increasing across the more concerning CPS categories (from 2.7 to 6.3). Aboriginal

Table 2
CPS involvement by socioeconomic status (a) most and least disadvantaged quintile (b) for non-Aboriginal and Aboriginal children born Jan 1 1986 to June 30, 2017 (to age < 18 or by June 30, 2017) number, percentage and relative risk (RR).

<table>
<thead>
<tr>
<th></th>
<th>Q1 Most disadvantaged n (%)</th>
<th>Q5 Least disadvantaged n (%)</th>
<th>RR Q1:Q5 (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Aboriginal children</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever CPM notification</td>
<td>29,294 (17.5)</td>
<td>4,764 (5.2)</td>
<td>3.37 (3.3 – 3.5)</td>
</tr>
<tr>
<td>Ever investigated</td>
<td>17,122 (10.2)</td>
<td>2,517 (2.7)</td>
<td>3.77 (3.6 – 3.9)</td>
</tr>
<tr>
<td>Ever substantiated</td>
<td>9,131 (5.5)</td>
<td>1,090 (1.2)</td>
<td>4.60 (4.3 – 4.9)</td>
</tr>
<tr>
<td>Ever placed in OOHC</td>
<td>4,222 (2.5)</td>
<td>0,370 (0.4)</td>
<td>6.26 (5.6 – 7.0)</td>
</tr>
<tr>
<td>Any CPS contact</td>
<td>44,657 (26.7)</td>
<td>9,071 (9.9)</td>
<td>2.70 (2.7 – 2.8)</td>
</tr>
<tr>
<td>No CPS contact</td>
<td>122,413 (73.3)</td>
<td>82,782 (90.1)</td>
<td></td>
</tr>
<tr>
<td><strong>Aboriginal children</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever CPM notification</td>
<td>7,006 (50.3)</td>
<td>156 (22.7)</td>
<td>2.22 (1.9 – 2.6)</td>
</tr>
<tr>
<td>Ever investigated</td>
<td>4,919 (35.3)</td>
<td>103 (15.0)</td>
<td>2.35 (2.0 – 2.8)</td>
</tr>
<tr>
<td>Ever substantiated</td>
<td>3,195 (22.9)</td>
<td>57 (8.3)</td>
<td>2.76 (2.1 – 3.5)</td>
</tr>
<tr>
<td>Ever placed in OOHC</td>
<td>1,741 (12.5)</td>
<td>31 (4.5)</td>
<td>2.78 (2.0 – 3.9)</td>
</tr>
<tr>
<td>Any CPS contact</td>
<td>8,629 (62.0)</td>
<td>222 (32.3)</td>
<td>1.92 (1.7 – 2.1)</td>
</tr>
<tr>
<td>No CPS contact</td>
<td>5,299 (38.0)</td>
<td>777 (67.7)</td>
<td></td>
</tr>
</tbody>
</table>

Note: (a) Using the index of relative socioeconomic disadvantage (IRSD), published by the Australian Bureau of Statistics (ABS) (2018).
children in the most disadvantaged quintile had double the likelihood of involvement across all CPS categories compared with Aboriginal children in the least disadvantaged quintile.

6. Discussion

Using linked administrative data, this study has estimated the cumulative incidence of contact with the CPS in South Australia, by type of involvement and timing across childhood and described how this has changed over recent decades. For Aboriginal and non-Aboriginal children, cumulative incidence of CPS involvement has increased across cohorts born between 1986 and 2009 and occurring earlier in children’s lives. For children born after 2009, there has been no further increase and, for some categories, there appears to have been a reduction in rates of involvement with the trend to earlier-in-life contact continuing.

Ever-placement in OOHC has remained relatively stable across the decades. Taken together with annual reporting of increasing numbers of children in care, this means children are remaining in care for longer. We also note that historically not all OOHC placement has followed a CP substantiation. These children were predominantly in care for very short periods (typically less than 7 days) under a voluntary arrangement with the parent/carer who was temporarily unable to care for their child. This represented a considerable portion of children to enter OOHC in the 1990s but has become uncommon in recent cohorts.

Large differences in CP involvement were identified between Aboriginal and non-Aboriginal children, across all cohorts, consistent with other Australian data (Bilson et al., 2015; Delfabbro et al., 2010; Productivity Commission, 2018) and the international literature (Barker et al., 2014). While SES explains part of this difference, it by no means explains all or even most. Histories of trauma, dispossession of land, decades of forced child removal based on race (1910–1970), loss of culture/language, wide-ranging social and economic adversities, adult mental illness, substance misuse (consequences of trauma), and intergenerational trauma impact on socio-economic determinants (at individual, family and community level), all of which contribute to the conditions for child maltreatment.

The significantly higher incidence of Aboriginal children within the CPS cannot be ignored. That 25% of Aboriginal children will be the subject of a substantiated child abuse or neglect investigation and over 12% of Aboriginal children will be placed for some period in OOHC confers a sense of urgency to partnering with Aboriginal communities to reduce these numbers. Healing is possible and successful strategies must be supported that restore sense of self and enhance capacity to parent and participate fully in society. The high incidence of removal, combined with increasing time in care, means that many Aboriginal children are separated from their parents for extended periods (noting also that over 50% of placements are with kin). The presence and effect of bias and racism influencing CPS involvement has not been formally studied, but needs to be, and could inform strategies to reduce the over-representation of Aboriginal children within the CPS.

Researchers and policy makers need child maltreatment estimates to determine the size of the public health problem and the scale of the required community response. Studies have sought to estimate prevalence of child maltreatment using survey data (e.g. Doidge, Edwards, Higgins, & Segal, 2017), Price-Robertson, Bromfield, and Vassallo (2010), but such studies are subject to recall bias and exclusion from the sample frames of those most damaged by child maltreatment, such as persons who died early, are homeless, incarcerated or have major mental health or drug and alcohol problems (Doidge, Edwards et al., 2017).

Some researchers advocate the use of administrative data to estimate child maltreatment prevalence (Hurren, Stewart, & Dennison, 2017) and it is increasingly applied for this purpose (Bilson et al., 2015; Degli Esposti, Taylor, Humphreys, & Bowes, 2018; Kim et al., 2017; Wildeman et al., 2014). But while administrative CPS data ensures completeness of the sample frame, it is subject to policy and definitional shifts and may be affected by CPS resourcing changes. CPS involvement does not map exactly onto child maltreatment. Not all child abuse cases will come to the attention of the CPS (Mathews, Bromfield, Walsh, & Vimpani, 2015; Mathews et al., 2016) and there can be some subjectivity in case definition. Nonetheless, CPS administrative data is especially pertinent to the development of services directed towards reported cases of maltreatment. It can inform policy discussion and provide translational opportunities (Hurren et al., 2017).

Lifetime CPS involvement is appreciably higher than yearly prevalence rates, as few children ever-involved with the CPS have contact on a yearly basis. Linked administrative data that can track engagement from birth to age 18 is the only way to accurately measure cumulative incidence across childhood. From our study, we found that 3.5% of non-Aboriginal children born between 1986 and 2009 were ever the subject of a child protection substantiation, which can be compared with published annual substantiation rates of less than 0.5% (4.1 to 4.8/1000 across the study period, Productivity Commission, 2018, Productivity Commission, 2008, 2008). A similar difference is observed for Aboriginal children. Close to 25% of children born between 1998 and 2009 were ever the subject of a substantiation, contrasting with published annual substantiation rates of 2.8 to 4.3% (Productivity Commission, 2008, 2018).

The percent of children ever to enter OOHC was relatively stable across the 27 years observed in our study, at around 1.5% of non-Aboriginal children (varying slightly across cohorts) and nearly 13% of Aboriginal children. At the same time, the number of children in OOHC in SA has increased considerably, for example from 1,204, (3.5/1000 children) in care on 30 June 2004, nearly trebling to 3,484 children (9.5/1000) in care by 30 June 2017. This tells us that mean time in care must have dramatically increased.

The study finding that CPS involvement is occurring earlier in life, likely reflects a social and legislative impetus for more complete, and prompt identification of child maltreatment (Australian Institute of Family Studies (AIFS), 2015; Government of South Australia (SA), 2018; Phillips, 2009) facilitated by an extension in the range of professionals and occupations included in mandatory reporting legislation (Children and Young People (Safety) Act 2017 (SA) s.9 and s.30). A policy and practice push for earlier identification is consistent with the growing literature describing the serious long-term harm from child maltreatment and the role of early-in-life ‘toxic stress’ on the developing brain (Egeland, Sroufe, & Erickson, 1983; Felitti et al., 1998; National Research Council...
available at https://people.unisa.edu.au/Leonie.Segal/research

Government data custodians and an Aboriginal reference group and consumer reference group. Membership of these committees is ChildProtection, with frequent conversations with senior policy officers and the considerable time allocated by the data team to data research through the provision of data and advice has made the research possible. Of foremost in this respect is the SA Department of Child Protection, with frequent conversations with senior policy officers and the considerable time allocated by the data team to data extraction.

We acknowledge the valuable input from the Steering Committee established for the study of key stakeholders, primarily SA Government data custodians and an Aboriginal reference group and consumer reference group. Membership of these committees is available at https://people.unisa.edu.au/Leonie.Segal/research

7. Conclusion

The human story sitting under these data is distressing and disturbing. Many families are struggling to create a home environment that is safe and nurturing for their children as implied by the high observed rates of life-time CPS involvement. Rates of child removal across childhood are considerable, a tragedy for children and parents alike. The cost on society is huge, with the impact felt disproportionately by certain communities, especially Aboriginal Australians and other communities characterised as socio-economically disadvantaged. Removing a child from their family is a serious policy response. Using linked data, we have ascertained that around 1 in 50 SA children experience such removal some time during their childhood. It is surely a priority to understand the ramifications of this policy and whether all steps are being taken to support families to create a safe and nurturing environment before removal is considered unavoidable, to explore how to support safe reunification and ensure periods in OOHC improve child health and well-being and social outcomes.

As a society, we must do better to support vulnerable families. This will require a combination of policies first to address the social determinants – to alleviate deep poverty, homelessness, low pre-school/school engagement, exclusion from the workforce, justice involvement, address racism, and bullying; and second to offer intensive and therapeutically-focused family support programs. The latter must include culturally safe strategies to address histories of trauma and promote healing, given the known role of trauma and multiple adversity as predictors of child maltreatment. The disproportionate involvement of Aboriginal Australians demands a special policy response. Aboriginal families must be involved in defining the responses, which will ensure their children are raised in safe environments.

A reduction in children involved in the CPS must become an urgent community priority, with a reduction in the disparity between Aboriginal and non-Aboriginal children an urgent goal. The evidence linking trauma history and current childhood/family adversity to child maltreatment, and the high rates of trauma and adversity in Aboriginal populations, is reflected in our findings. While socio-economic status is part of the driver, it does not fully explain the disparity in CPS engagement between Aboriginal and non-Aboriginal children. A considerable change in policy and a redirection of resources will be required to turn this tragedy around.

Combining our findings of incidence across childhood with published expenditure data can further inform the required policy response. In SA, in 2017-18, only 14% of the CPS budget was spent on combined ‘protective intervention services’ ($44 million) and ‘intensive family support services ($34 million’), the rest ($425 million) going on OOHC, ((Productivity Commission, 2018), Table 16A.7). This balance seems unlikely to be the best way to support our most troubled families.

Much can be learnt by combining longitudinal/linked administrative data with annual reporting - identifying the key questions, generating the data to explore the answers and test the effect of policy and practice change. The value of combining annual and longitudinal data to generate a richer child protection story to better inform policy and to assess policy success is clear. How else will we know if we are achieving better outcomes for our children and families, in both immediate child safety and long-term and intergenerational impacts?

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ongoing/report-on-government-services.


