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# Scoping enhanced measurement of child wellbeing in Australia

Discussion paper

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**Australian Institute of  
Health and Welfare**

# **Scoping enhanced measurement of child wellbeing in Australia**

**Discussion paper**

**November 2019**

Australian Institute of Health and Welfare  
Canberra

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# Executive Summary

This discussion paper scopes opportunities for enhancing measurement of child wellbeing. It is a companion paper to Measurement and accountability for child wellbeing outcomes in Australia (Walsh 2018), and focuses primarily on the national data and information landscape. It has been prepared by the Australian Institute of Health and Welfare and funded by The Benevolent Society (TBS).

This paper provides a preliminary summary of the current national child wellbeing data and reporting landscape, identified key data gaps and opportunities for development. It is expected that this material will continue to evolve and expand as a result of further stakeholders discussions, with specific development opportunities highlighted in this paper designed to serve as a starting point for any future targeted consultation.

## Key messages

### **There is a solid foundation for national data and reporting of children’s wellbeing**

- There are several national reporting frameworks which relate to child wellbeing. Overall, these national frameworks reflect a common understanding of the critical concepts (domains) required to describe children’s wellbeing.
- Collectively, the large number of indicators which underpin these frameworks cover a wide range of topics; for example, protective and risk factors for both children and families, chronic disease, education outcomes, family income, and employment status.
- However, there is variation in the:
  - breadth of topics covered in each domain. For example, national data are available for indicators over 20 topics within the Health domain, compared with less than six topics for the domains of Employment, and Income and finance combined.
  - maturity of indicators available for reporting, with generally well-established indicators used to describe most of the existing topics in the Health, Education and skills, and Income and finance domains, and relatively less-established indicators used to describe several topics in Social support, and Justice and safety, particularly for children outside of the child protection population.
  - type of indicators included, with the majority of indicators reflecting outcomes for which multiple entities (governments, service providers, or other) are all likely to have an impact.
- This variation reflects a number of factors, including the different purposes of the frameworks, and the availability of appropriate data sources and/or indicator specifications.

### **A number of data and information gaps exist**

Data and information gaps limit the extent to which Australia can understand child wellbeing. In regards to national reporting examined, data gaps and/or limitations exist in regard to:

- Specific topics related to child wellbeing
  - A number of both long-standing and new (emergent) gaps exist across all domains related to children’s wellbeing. For example, current national population-level monitoring over time is limited for topics such as parenting, Fetal Alcohol Spectrum Disorder, sleep, cultural identity, children’s subjective views on a range of life areas, school expulsion, intergenerational welfare dependence, access to specific social

supports (such as community health and family support services), and community and environment factors, such as walkability, and natural environments.

- Disaggregation by relevant sub-population groups
  - Current reporting does not adequately report data by a number of special population groups, including refugee and asylum seekers, children from culturally and linguistically diverse backgrounds or born overseas, children with disability, and children in contact with the child protection system. Reporting by socioeconomic status and low levels of geography is limited.
- Service-level data
  - At a national level, there are a large number of administrative data collections which can describe children's use of government-funded services (for example, community mental health services or hospitals) or receipt of child-related payment supports. However, data are not routinely and/or consistently available on the wide range of other services provided to children and families, for example those services provided by non-government organisations (NGOs) and other state or local-based community health and welfare services.

### **Development opportunities exist**

This paper provides a number of potential development opportunities relating to data and information, data linkage and reporting.

- Some national reporting gaps could potentially be filled through enhancements to existing data sources: for example, the ABS Time Use Survey; the development of new indicators (for example, using Centrelink data); and considering further how alternative data assets could inform related national data development and/or reporting.
- The integration (linkage) of individual data sources, using secure methods that protect the privacy and confidentiality of individuals, provides opportunities for substantial research and policy insight not previously available. In particular, analysis of linked data can be used to better understand children's pathways and transitions, evaluate services and policies, and provide a valuable evidence base for defining risk and protective factors which can inform the development of more predictive indicators. In addition, where data are already captured about special needs groups, such as children in contact with the child protection system and/or out-of-home care, linkage provides opportunities to compare patterns across groups, particularly with respect to their different pathways and outcomes.
- A sophisticated national data and reporting platform which supports the collation, presentation and sharing of people-centred data about children, across multiple domains, and according to place or location, would inform a wide range of information needs related to children's wellbeing. Sharing of such information would be in the context of modern data governance practices that assure the privacy and confidentiality of individuals and organisations contributing data, while maximising the benefits of these important public data assets.



# 1 Introduction

## 1.1 Purpose

National reporting of children's wellbeing has been of long-term interest to stakeholders across multiple sectors including community services, education and health. More recently, the subject of children's wellbeing reporting has received significant attention from both government and non-government sectors, as evidenced by data-related recommendations in reports from the [Royal Commission into the Protection and Detention of Children in the Northern Territory](#), the [Royal Commission into Institutional Responses to Child Sexual Abuse](#), the [Royal Commission into Family Violence \(Victoria\)](#) and the [Australian Human Rights Commission](#). In line with these developments, the Australian Institute of Health and Welfare (AIHW) undertake work to scope enhanced measurement of child wellbeing in Australia.

This discussion paper provides an overview of the national data and indicator landscape relating to child wellbeing. In addition to identifying key data gaps, it points to existing data assets and cross-jurisdictional data linkage arrangements which may provide opportunities to enhance measurement and reporting. Improvements to how child wellbeing data and information are reported are also discussed. Specific development opportunities highlighted in this paper are designed to serve as a starting point for any future targeted consultation and could be explored in more detail by AIHW through future projects.

## 1.2 Background

A child's wellbeing results from the interplay of many interrelated individual, societal, and environmental factors (AIHW 2017b). A positive start in life helps children to reach their full potential, while a poor start increases the chance of adverse outcomes. This can have far-reaching consequences, not just throughout the lives of the children themselves but potentially for successive generations. As the most vulnerable members of society, children also have the right to be protected from harmful influences and abuse (AIHW 2012).

While parents have the primary caring role for their children, ensuring that all children get the best possible start in life is a shared responsibility of families, the wider community and governments. The benefits of investing in children and families flow through to the entire population, with outcomes as diverse as greater productivity, lower burden of disease, stronger families, and safer and more connected communities.

In Australia, there is a strong foundation for national data and reporting related to children's wellbeing. However, a range of data gaps exist, and in recent years there has been no commitment to regular, national reporting in this area.

This work complements work already underway by the AIHW. In 2019, the AIHW plans to release a national children's compendium report and associated products which will bring together the latest key data about children's wellbeing, highlighting how children are faring overall, and data and information gaps. This report is part of a broader AIHW vision to re-establish a strategic, ongoing approach to the development and reporting of information relating to child and youth wellbeing, which can be regularly updated.

Work to improve the measurement of child wellbeing is also relevant to the Australian Government [National Action Plan for the Health of Children and Young People 2020–2030](#).

In undertaking this work, the AIHW conducted a desktop review of: national child wellbeing frameworks, including their domains, topics and indicators; available national data assets and alternative sources; relevant national and jurisdictional data linkage work; and published reports relating to children's wellbeing. As a result of these reviews, gaps in national reporting were identified, and possible development opportunities also identified.

## 2 Current state of national children's wellbeing reporting

### 2.1 Reporting frameworks and indicators

Frameworks provide the foundations for describing and/or assessing a concept or subject. From a reporting perspective, they provide a meaningful and logical way to organise indicators which are considered important to stakeholders and can be reported regularly to inform understanding. Frameworks are generally broken into domains under which indicators are grouped into broad topics.

There are several different types of indicators (Box 1). Selecting the most appropriate for a framework is dependent on its purpose; for example, some indicators may be better suited for describing progress in the short- to medium-term, and others progress in the long-term. Ideally, an overarching framework should be flexible enough to support a broad range of reporting purposes, each of which may require different indicators and/or indicator sets.

Consistent with this, existing national child wellbeing frameworks endeavour to provide a suite of complementary indicators which describe progress in both the short- and long-term to provide greatest utility. However, the current approach has some limitations, particularly with regard to the extent to which current indicators can be used for accountability purposes, either at the government or service level.

#### **Box 1: Types of indicators**

There are different types of indicators which can be used to measure progress against a defined objective (COAG 2011). These include:

- Outcome indicators

Outcome indicators typically measure the status of individuals or the community; for example, infant mortality, disability prevalence, or smoking status. Assessment of progress against these measures depends on how quickly the 'outcome' can change. For example, an indicator of chronic disease prevalence would be considered a long-term outcome because of the long time period over which chronic disease develops. Short- to medium-term outcome indicators could include teenage drinking or smoking rates.

Outcome indicators are very useful for summarising how well people, populations and service systems are faring, however, they are rarely suited to accountability because of the multiple services, sectors, governments and/or professionals that play a role in impacting the outcome.

- Output indicators

Output (or process) indicators describe services and/or interventions which are delivered. To be useful, there needs to be a proven causal link (or at a minimum, proven association) between the output and outcome of interest. A well-established example of an output indicator is immunisation coverage, given the proven role that immunisation plays in preventing communicable diseases.

- Input indicators

Input indicators measure resource or expenditure inputs. These indicators have a role in describing contextual business and/or financial activity related to a program, policy or system but, alone, are not generally considered suitable for performance reporting as they do not provide any information about the quality or outcomes of a service. These indicators are often considered contextual.

## 2.2 National frameworks relevant to the reporting of children’s wellbeing

There are a large number of existing national frameworks and indicator sets that are relevant to children’s wellbeing reporting. Table 1 categorises these as: general child wellbeing frameworks (that is, holistic in nature); subject-specific child wellbeing frameworks; and whole-of-population frameworks.

**Table 1: National child reporting frameworks**

General child wellbeing frameworks	Subject-specific child wellbeing frameworks	Whole of population wellbeing frameworks
<p><b>Government</b></p> <p>Key national indicators of child health, development and wellbeing (<i>A Picture of Australia’s children (APOAC)</i>)</p> <p>Children’s Headline Indicators (CHI)</p> <p><b>Non-government</b></p> <p>ARACY’s The Nest</p>	<p><b>Health</b></p> <p>National Action Plan for the Health of Children and Young People: 2020–2030/Healthy, Safe and Thriving Framework (HST Framework)</p> <p>Core maternity indicators</p> <p><b>Child safety</b></p> <p>National Framework for Protecting Australia’s Children (NFPAC)</p> <p>National Standards for Out-of-Home Care</p> <p><b>Families</b> <sup>(a)</sup></p> <p><b>Education</b></p> <p>National Education Agreement (NEA)</p> <p>National Education Reform Agreement</p>	<p>Australian Health Performance Framework (AHPF) <sup>(b)</sup></p> <p>Australia’s Welfare Indicator Framework</p> <p>Health Performance Framework (Indigenous) (HPF)</p> <p>National Healthcare Agreement (NHA)</p> <p>National Housing and Homelessness Agreement</p> <p>National Indigenous Reform Agreement (NIRA)</p>

(a) Two national pieces of work are relevant to families, but have not been examined further in this paper: CAFS Outcomes Framework approach (not a framework but a summary of related human services frameworks at state/territory levels); and Department of Social Services Family functioning and children’s outcomes.

(b) The National Health Performance Framework (NHPF) and the Performance and Accountability Framework (PAF) have been subsumed by the Australian Health Performance Framework (AHPF). In this work, all indicators in the NHPF and PAF were considered (not just the initial indicators identified for reporting under the AHPF).

While Table 1 focuses on national child reporting frameworks, it is worth noting that there are several other non-national indicator sets/reports/models which are relevant and were considered throughout the development of this report. These include:

- [NSW Human Service Outcomes Framework](#) outcomes mode—a cross-agency framework which specifies seven wellbeing outcomes for the NSW population (safety, home, economic, health, education and skills, social and community, and empowerment) and aims to consider the pathways between them.
- [Tasmanian Child Youth Wellbeing Framework](#)—based on the Australian Research Alliance for Children and Youth’s (ARACY) [The Nest](#), this framework considers development in three focus areas: prenatal, infancy and early years (4 years and under); the middle years (5 to 12 years); and adolescence to young adulthood (13 years and over).
- Australian Human Rights Commission—[The Children’s Rights Report 2017](#) outlines work the National Children’s Commissioner has undertaken throughout 2016–17 to promote the human rights of children and young people in Australia. The report discusses recurrent child wellbeing themes in contemporary Australia with a focus on safety, social support and health issues. This is the latest of a series of annual reports published by the Australian Human Rights Commission on this subject.
- [Australian Child Wellbeing Project \(ACWP\)](#)—the ACWP is a key project related to child wellbeing and offers insight into the possible development of subjective child wellbeing indicators.

## 2.3 Commonalities across national frameworks and indicators

This section provides a summary of the assessment approach used to review the frameworks and outlines commonalities at the domain and topic level.

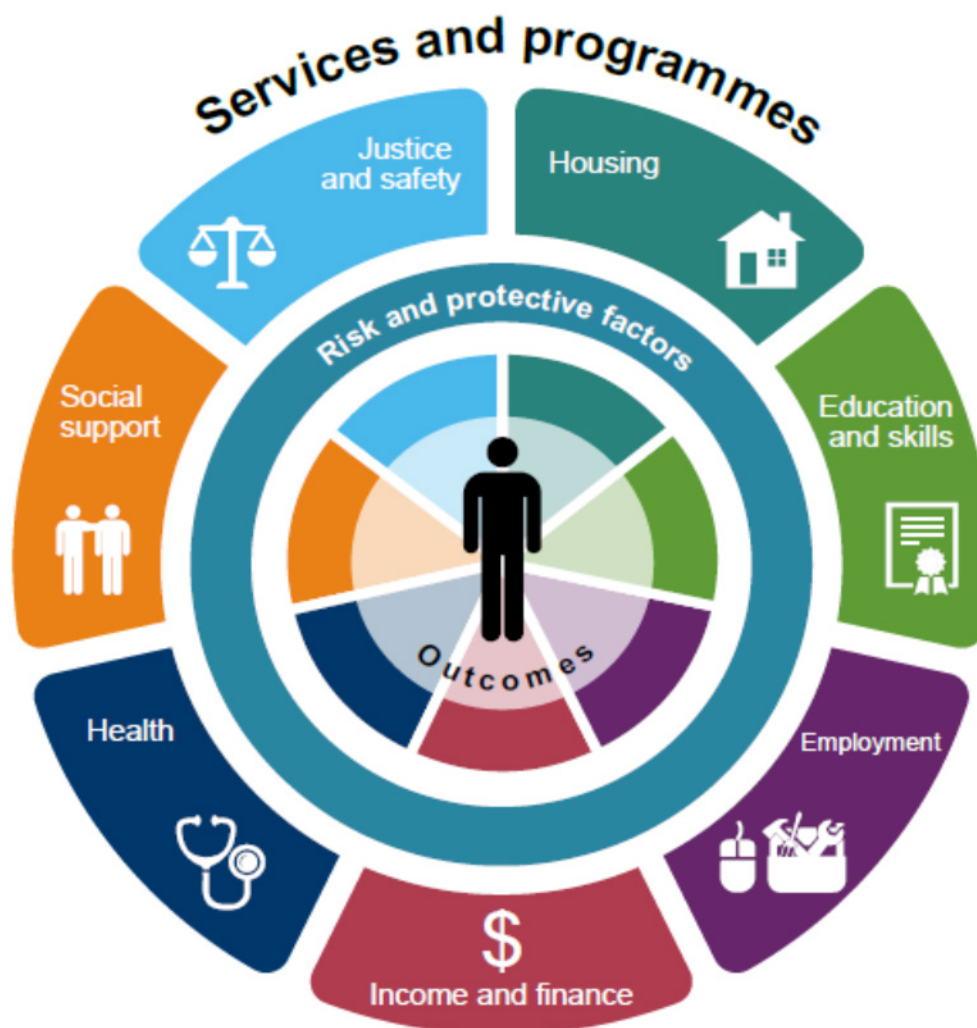
### 2.3.1 Assessment approach

The framework selected to underpin the findings of this scoping project is the people-centred data model developed by the AIHW to measure and report on the health and welfare of the general population. The AIHW people-centred data model (Figure 1) is based on social-ecological models of the determinants of health and wellbeing, and identifies seven key information domains across the health and welfare sectors: Health, Social support, Justice and safety, Housing, Education and skills, Employment, and Income and finance. These domains can also assist in understanding the experiences of children within the context of the wider service delivery system.

The AIHW people-centred data model is a useful basis to structure the findings of this report as it focuses on the experiences and outcomes of the individual while acknowledging the interactions between the domains. It acknowledges the influence of individual and societal factors, and that some population groups are in greater need of health and welfare services. In the future, amendments could be made to this framework so it specifically represents the child's perspective, rather than that of the general population overall. For example, from a practical perspective, there may be merit in reconceptualising the domains of Employment, and Income and finance so they are better suited to the child—current indicators under these domains generally apply to a child's household, rather than the child themselves.

In addition, while not specifically represented on Figure 1, there are other sector and contextual factors that influence the community children live in (that is, their environment) that are relevant to wellbeing. Environmental factors, including physical environment, social environment, socio-economic factors, access to services, and governance can all influence a child's wellbeing and development, and data on these factors can assist our understanding of children's experiences in their community. The Kids in the Community Study (KiCS) provides some insight into these factors.

Figure 1: AIHW people-centred data model



### 2.3.2 Commonalities at the domain level

Table 2 summarises the coverage of the AIHW people-centred data model domains across the national child reporting frameworks in Table 1. The NSW Outcomes Framework has also been included at this level, despite it not being a national framework, as it has received a significant amount of interest from various members of several Children and Families Secretaries (CAFS) working groups.

While ARACY's The Nest is the only framework that covers all seven domains, the majority of the remaining frameworks and/or indicator sets cover five to six of the seven domains, highlighting that overall, these national frameworks reflect a common understanding of the critical concepts (domains) required to describe children's wellbeing. However, there is significant variation in how many frameworks and/or indicator sets cover each of the seven domains, as the frameworks differ in purpose. For example, Health is covered by all except the National Standards of Out-of-Home Care, while Employment is only covered by ARACY's The Nest and the AIHW's Australia's welfare indicators.

**Table 2: Coverage of the AIHW People-centred data model domains across national child reporting frameworks**

Domain	APOAC	CHI	HST Framework	ARACY	NFPAC	National Standards for Out-of-home Care	National core maternity indicators	AHPF	Australia's Welfare	National intergovernmental agreements	ATSI HPF	NSW Outcomes Framework
Health	✓	✓	✓	✓	✓		✓	✓	✓	NHA; NIRA	✓	✓
Social support	✓	✓	✓	✓	✓	✓			✓		✓	✓
Justice and safety	✓	✓	✓	✓	✓	✓			✓		✓	✓
Housing	✓	✓	✓	✓	✓				✓	NHHA	✓	✓
Education and skills	✓	✓	✓	✓	✓	✓			✓	NEA; NIRA	✓	✓
Income and finance	✓	✓		✓	✓				✓			✓
Employment				✓					✓			

(a) The NSW Outcomes Framework and the HST Framework have not been considered beyond the domain level (this table) as these frameworks do not define specific indicators and/or topic areas to the same level of detail as the other frameworks reviewed.

Abbreviations: AHPF (Australian Health Performance Framework), APOAC (A Picture of Australia's Children), ARACY (Australian Research Alliance for Children and Youth), ATSI HPF (Aboriginal and Torres Strait Islander Health Performance Framework), CHI (Children's Headline Indicators), HST Framework (Healthy Safe and Thriving Framework), NEA (National Education Agreement), NFPAC (National Framework for Protecting Australia's Children), NHA (National Healthcare Agreement), NIRA (National Indigenous Reform Agreement), National Housing and Homelessness Agreement (NHHA)

### 2.3.3 Commonalities at the topic level

Domains by their nature are very broad, and are unable to convey the depth of commonalities that may exist between the selected frameworks. Table 3 provides a summary of the topics covered under each domain, and the extent to which they are covered in each of the frameworks reviewed. The large number of indicators which underpin these frameworks cover numerous topics including: maternal and infant health, children as carers, neighbourhood safety, homelessness, quality childcare, dependence on government payments, and jobless families.

Table 3 shows that while there are some commonalities in topics across frameworks, particularly the Health and Education domains, substantial variation exists. Variation exists in the breadth of topics covered in each domain; for example, over 20 topics are reported within the Health domain compared with less than six topics within the domains of Employment, and Income and finance combined. Although the latter finding is not surprising, as most children are not employed, these domains are still relevant to the child from a household perspective.

The maturity of indicators available for reporting also impacts the breadth of topics covered in each domain, with well-established indicators used to describe most of the existing topics in the domains of Health, Education and skills, and Income and finance domains, and relatively less-established indicators used to describe several topics in Social support, and Justice and safety, particularly for children outside of the child protection population.

To provide a more specific assessment of the degree of overlap between the frameworks would require a more substantial piece of work examining the indicator specifications in more detail along with the intent of their measurement. For example, while there are very well-established metrics for measuring mortality, the specific measures used within frameworks differ (for example, infant mortality, cause of death, child mortality), to reflect the different purposes of the reporting frameworks.

**Table 3: Summary of topic areas covered by child reporting frameworks**

Domain	Topic area	APOAC	CHI	ARACY	NFPAC	National Standards for Out-of-home Care	National core maternity indicators	AHPF	Australia's Welfare	National intergovernmental agreements	ATSI HPF
Health	<b>Maternal and infant health</b>										
	Smoking in pregnancy	✓	✓	✓			✓			NIRA	✓^
	Drinking in pregnancy	✓									✓^
	Substance use during pregnancy										✓^
	Antenatal care				✓		✓	✓		NIRA	✓^
	Labour and birth characteristics (incl. episiotomy)						✓				
	Perinatal mortality										✓^
	Infant mortality	✓	✓	✓				✓	✓	NHA	✓
	Birthweight	✓	✓	✓				✓		NHA; NIRA	✓
	Small for gestational age							✓			
	Apgar score							✓			
	Teenage births	✓		✓	✓						
	Breastfeeding	✓	✓								✓^
	<b>Child health</b>										
	Immunisation	✓	✓	✓					✓		✓^
	Health checks										✓^
	General practitioner consultations										✓^
	Child mortality	✓						✓		NHA;NIRA	✓
	Chronic conditions	✓						✓			✓^
	Cancer survival	✓									
	Dental health	✓	✓	✓							✓^
	Disability	✓							✓		✓
	Mental health conditions	✓						✓		NHA	✓
Social and emotional wellbeing	✓	✓	✓								

(continued)



**Table 3 (continued): Summary of topic areas covered by child reporting frameworks**

Domain	Topic area	APOAC	CHI	ARACY	NFPAC	National Standards for Out-of-home Care	National core maternity indicators	AHPF	Australia's Welfare	National intergovernmental agreements	ATSI HPF	
Health (continued)	Rebuilding resilience of abuse survivors				✓							
	Injuries – deaths	✓	✓	✓	✓							
	Injuries – hospitalisations	✓							✓		✓	
	All hospitalisations										✓^	
	Potentially preventable hospitalisations										✓^	
	Discharge against medical advice										✓^	
	Communicable diseases										✓^	
	Ear health										✓^	
	Eye health										✓^	
	Kidney disease										✓^	
	Transmissible diseases										✓^	
	Access and need for health care services										✓^	
	Drug and alcohol services										✓^	
		<b>Protective and risk factors</b>										
		Overweight and obesity	✓	✓	✓						NHA	
		Physical activity	✓									✓^
		Diet			✓				✓			
	Nutrition										✓^	
	Environmental tobacco smoke	✓						✓			✓^	
	Smoking	✓		✓								
	Drinking	✓		✓								

(continued)

**Table 3 (continued): Summary of topic areas covered by child reporting frameworks**

Domain	Topic area	APOAC	CHI	ARACY	NFPAC	National Standards for Out-of-home Care	National core maternity indicators	AHPF	Australia's Welfare	National intergovernmental agreements	ATSI HPF
Social support	Participation					✓					
	Social networks (parents/guardians being able to get help when needed)	✓	✓								
	Family functioning	✓			✓				✓		
	Family support service use				✓						
	Parental health status	✓			✓						
	Parental substance use (drugs)				✓						
	Parental substance use (alcohol)				✓						
	Children as carers			✓					✓		
	Language			✓							
	Community activity						✓				
	Family connection						✓		✓		
	Family contact						✓				
	Sense of community						✓				
	Significant person						✓		✓		
Community functioning – vitality											✓^
Justice and safety	Neighbourhood safety	✓		✓	✓				✓		
	Child abuse and neglect	✓	✓		✓	✓			✓		✓^
	Child protection re-substantiations	✓			✓				✓		
	Children in grandparent care	✓									
	Children in non-parental care	✓		✓	✓				✓		

(continued)

**Table 3 (continued): Summary of topic areas covered by child reporting frameworks**

Domain	Topic area	APOAC	CHI	ARACY	NFPAC	National Standards for Out-of-home Care	National core maternity indicators	AHPF	Australia's Welfare	National intergovernmental agreements	ATSI HPF
Justice and safety (continued)	OOHC – sense of security					✓			✓		
	OOHC – case plan					✓					
	Placement stability				✓	✓					
	Carer retention				✓						
	Leaving care plans				✓	✓					
	Leaving care preparation					✓					
	Cross-sector clients				✓				✓		
	Placement of Indigenous children (compliance)										
	Placement of Indigenous children (relatives/kin)				✓	✓					
	Relative/kin placement					✓					
	Placement of Indigenous children (agency)				✓						
	Cultural support plans				✓	✓					
	Foster carer households					✓					
	Carer training					✓					
	Sexual abuse substantiations					✓			✓		
	Children as victims of violence	✓				✓					✓^
	Children and crime	✓		✓					✓		
	Domestic violence			✓		✓					
Young people on remand										✓^	
Unsentenced detention										✓^	

(continued)

**Table 3 (continued): Summary of topic areas covered by child reporting frameworks**

Domain	Topic area	APOAC	CHI	ARACY	NFPAC	National Standards for Out-of-home Care	National core maternity indicators	AHPF	Australia's Welfare	National intergovernmental agreements	ATSI HPF
<b>Housing</b>	Shelter (homelessness; overcrowding; housing stress)		✓							NHHA	
	Housing stress			✓					✓	NHHA	
	Homelessness			✓						NHHA	
	Overcrowding			✓						NHHA	
	Children attending homelessness services	✓		✓	✓				✓	NHHA	✓^
	Access to functional housing and/or housing that meets needs									NHHA	✓^
	Social Housing									NHHA	
<b>Education and skills</b>	Early learning – reading to children	✓		✓							
	Early learning (informal)										✓^
	Childcare			✓					✓		
	Quality childcare	✓									
	Early childhood education (enrolled/attending)	✓	✓	✓	✓				✓	NIRA	
	Transition to primary school	✓	✓		✓				✓		
	Attendance at primary school	✓	✓						✓	NIRA; NEA	✓^
	Literacy – reading	✓	✓	✓	✓				✓	NEA; NIRA	
	Literacy – writing						✓		✓	NIRA	✓^
	Numeracy	✓	✓	✓	✓	✓	✓		✓	NEA; NIRA	✓^
	Science			✓						NEA	
	School satisfaction			✓							
	School pressure			✓							
	Bullying and unfair treatment at school										✓^

(continued)

**Table 3 (continued): Summary of topic areas covered by child reporting frameworks**

Domain	Topic area	APOAC	CHI	ARACY	NFPAC	National Standards for Out-of-home Care	National core maternity indicators	AHPF	Australia's Welfare	National intergovernmental agreements	ATSI HPF
Income and finance	Family economic situation	✓	✓						✓		
	Dependence on government payments				✓						
	Poverty			✓							
	Income inequality			✓					✓		
	Information technology and internet			✓							
Employment	Jobless families			✓					✓		

^ One or more indicators is under development in this area or is not yet reported against for reasons including lack data source.

Abbreviations: AHPF (Australian Health Performance Framework), APOAC (A Picture of Australia's Children), AACY (Australian Research Alliance for Children and Youth), ATSI HPF (Aboriginal and Torres Strait Islander Health Performance Framework), CHI (Children's Headline Indicators), NEA (National Education Agreement), NFPAC (National Framework for Protecting Australia's Children), NHA (National Healthcare Agreement), NIRA (National Indigenous Reform Agreement).

### **2.3.4 Types of indicators**

Box 1 provided a brief overview of the types of indicators used to measure progress against an objective. When reviewing indicators in the selected frameworks, the majority were outcome (short- or medium- to long-term) indicators for which multiple entities (governments, services, or other) work together to impact. There were also a number of output indicators.

A number of the outcome and output indicators were considered to be predictive; that is, they measured risk and protective factors. Risk and protective factors can impact a person at a point in time, but can also have a causal or associative link to longer-term outcomes of interest. For this reason, these predictive indicators are important as they can be used to assess and measure progress over a shorter period of time (for example, improvement in smoking rates), compared with long-term outcome measures (for example, reduction in smoking-related deaths).

## 3 Current state of children's wellbeing data

Broadly speaking, major health and welfare data sources in Australia are either administrative data (collected when running a service or program) or survey data (for a targeted sample on a given topic). Data can also be described as cross-sectional or longitudinal. A cross-sectional data source represents a particular population at a specific time. A longitudinal data source collects data on the same subjects repeatedly over time. Most national data collections are cross-sectional, however, longitudinal studies are becoming more prevalent as their usefulness in many policy contexts becomes more recognised (AIHW 2017b). They can help governments to understand how individuals respond to different situations over time, they can be used to identify individual pathways, and (in some instances) be directly linked to changes and outcomes after specific policy interventions (FaHCSIA 2013). The data linkage developments described below in section 4 are also seeing administrative data linked over time and linked to longitudinal surveys, thereby creating richer longitudinal data than has previously been available.

In selecting an appropriate data source to fill data gaps, it is important that consideration be given to both the original purpose of the data collection (that is statistical as opposed to operational purposes) as well as the need being filled (for example, is it for indicator reporting and if so, what are the purposes of this particular indicator set?). Without these considerations, selected data may not fully or partially measure what it was expected to. Sometimes a data source may partially fill the needs of what we want to measure (either temporarily as a stop-gap measure or indefinitely) in which case it may be considered as a proxy measure. Proxy measures are used regularly to fill gaps where data sources are not available to fully meet the needs of an identified gap.

Currently there is a wide range of national data assets that are used to report on the indicators under the national frameworks reviewed in this paper. For a full list of currently used data assets by domain, see Appendix A: Table A1.

### 3.1 Key data assets relating to child wellbeing

The AIHW has undertaken a preliminary review of national and alternative data assets relevant to the measurement of child wellbeing in Australia. For these purposes, national data assets are defined as those which have national coverage and are administered and/or compiled by Australian Government agencies. Alternative data assets include data for a subset of the Australian population, usually administered by state/territory governments and/or academic institutions.

This process found that while a large number of the data assets are already used for child wellbeing reporting, some are underutilised or not used and offer potential opportunities to fill data gaps individually or through data linkage. The findings of the desktop review have been presented in two sections: current national data assets and alternative data assets. The section concludes with a summary of the data gaps in existing data assets.

### 3.1.1 National data assets

Table 4 below is a summary of the national data assets examined, including information on whether or not further interrogation of the data set is likely to fill any identified data gaps. There are a number of current national data assets that through linkage would yield opportunities to fill data gaps. Linkage projects will be subject to relevant Ethics Committee and data custodian approvals (in some cases this includes state and territory data providers).







The following should be noted when reading the table:

- Linkage methodologies that have been and/or could be used in the future vary widely between the collections listed depending on the individual constraints (i.e. data quality, variables included, underlying data policies/ethics/protocols that need to be adhered to). Methods can be deterministic (i.e. exact matches) or probabilistic (i.e. an allowable amount of pre-defined difference) and can include techniques that utilise full name, date of birth and other variables, unique identification numbers or generated statistical linkage keys. Any examples mentioned are meant to be indicative only and any linkage projects would need to be assessed at the time of project planning.
- The availability of a specific level of geographical data is not an indication of reporting capacity. Level of geographical reporting is dependent on the population size being reported against (that is, a small sub-population of AEDC such as CP will not be able to be reported at low levels of geographical level if at all).
- The Domain column refers to domains currently reported against using data from the asset, as well as domains where the data asset could be used to fill gaps. Where a data asset does not have a domain listed, either the data are not currently reported under the frameworks considered or the data are not viewed as a viable option for filling a gap.












**Table 4: National data assets summary table**






Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
<a href="#">Adoptions Australia Collection</a>	The Adoptions Australia Collection contains aggregate data on children placed for adoption and on finalised adoption orders in Australia, including the characteristics of adopted children, their parents and adoptive families.	No, linkage is not possible.	No.	No. Due to the small number of adoptions and the highly sensitive nature of the data, geographical data are not available.	Adoption data are not reported under the frameworks considered for this paper.	N/A
<a href="#">Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS NMDS)</a>	The AODTS NMDS contains information about government-funded alcohol and other drug treatment services; the clients who use these services; the principal drug of concern for which treatment is sought and the types of treatment provided. Data on children as young as 10 are available, however, due to the highly sensitive nature, data can only be released as a combined 10–19 year-age group.	The AODTS NMDS has in the past been linked to both the SHS collection <sup>1</sup> and the JJ NMDS <sup>2</sup> , both of which are relevant to child wellbeing and have also been linked to the CP NMDS.	Yes. Could be used to report on an (as yet to be agreed) indicator for drug and alcohol services being developed by HPF. A multi-data source linkage between AODTS NMDS and several other sources such as CP NMDS, SHS and JJ NMDS would provide insight into pathways through services. Other opportunities for the AODTS NMDS might include helping to form a picture of parenting factors and child outcomes.	Yes. SA2 data of drug treatment service is collected and have been used for reporting remoteness in <a href="#">Alcohol and other Drug Treatment Services in Australia 2016-17</a>	AODTS NMDS is not currently used to report any indicators under the frameworks considered for this paper. Currently reported alcohol and drug related indicators use survey based data for reporting.	
						
<a href="#">Ausplay Survey</a>	The Ausplay survey is a large scale national survey to track the sporting behaviours and activities of the Australian population. Since October 2015, data has been collected continuously with an annual target sample of 20,000 adults and children aged 15 and over and approximately 3,600 children aged 0–14.	Further information would be required to assess feasibility.	Yes. Could be used in conjunction with alternative data sources to report on involvement in extracurricular activities.	Yes. Data are collected and reported at the state level. Data are reported at 4 levels of remoteness (Major cities, inner regional, outer regional, remote/very remote).	Ausplay has been used to report against physical activity under the Health domain.	
						




<sup>1</sup> [Exploring drug treatment and homelessness in Australia: 1 July 2011 to 30 June 2014](#)

<sup>2</sup> [Overlap between youth justice supervision and alcohol and other drug treatment services: 1 July 2012 to 30 June 2016](#)





Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
<a href="#">Australian Cancer Database (ACD)</a>	The ACD contains data about all new cases of cancer diagnosed in Australia since 1 January 1982, excluding basal and squamous cell carcinomas of the skin.	The ACD is a commonly used AIHW linkage asset. As well as being used for internal projects, the ACD is regularly linked by the AIHW for external research projects. The Enduring Linked Cancer and Treatment Analysis Asset, which aims to bring together data from the ACD with health service, treatment and mortality data, will also provide opportunities. This analysis asset is currently being developed by AIHW, in conjunction with states, territories and the Commonwealth.	Yes. Linkage of the ACD to other child specific health and welfare sources, could be used to help understand pathways and outcomes for children with cancer. If an appropriate subjective wellbeing data source were available, via linkage, the ACD could also, for example, potentially be used to look at the subjective view of children's health amongst children cancer.	Yes. Cancer data are available and has been reported at various geographies, including PHN, SA3 and SA4.+	The ACD is currently used to report on several indicators in the Health domain.	
<a href="#">Australian Child and Adolescents Survey of Mental Health</a>	To date there have been two iterations of the Australian Child and Adolescent Survey of Mental Health which looked at the emotional and behavioural development of children and young people aged between 4 and 17 years. <a href="#">Young Minds Matter (YMM)</a> was the second iteration and included over 6,000 families with children and adolescents aged 4–17. Participation included face-to-face diagnostic interview with the parents or carers and a self-report on a tablet or computer from those young people aged 11–17 (approximately 3000). The first iteration was in 1998 and the second iteration was 2013–14.	In the past, YMM data has been linked with data from the Medicare Benefits Scheme (MBS), Pharmaceutical Benefits Scheme (PBS) and National Assessment Program - Literacy and Numeracy (NAPLAN) where consent was provided by survey participants.	Limited. The Australian Child and Adolescent Survey of Mental Health provides a rich subjective source of how Australian children view aspects of their personal emotional and behavioural wellbeing. However, funding for a third iteration of the survey has not been secured.	Yes. Address information is collected. Data are reported at 4 levels of remoteness (Major cities, inner regional, outer regional, remote/very remote).	The Strengths and Difficulties Questionnaire (SDQ) component of the YMM survey has been used to report against Mental Health indicators in the Health domain.	  
<a href="#">Australian Early Development Census (AEDC)</a>	The AEDC is a nationwide data collection of early childhood development at the time children commence their first year of full-time school.	The AEDC is regularly linked by the AIHW and other linkage units. A project is currently underway to link AEDC and child protection	Yes. There are a number of variables, including demographics related to	Yes. Various geographical disaggregations are available, including SA2 and SA3.	The AEDC collection is currently used to report on indicators in the Education domain.	





Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
		(CP) data. The resulting linked data will be maintained as an ongoing collection. There is potential to expand this collection by linking to additional education sources (such as NAPLAN) or data sources relating to specific population groups (such as disability data).	cultural and linguistic diversity, in the AEDC. Additional exploration of AEDC as a component of an educational pathways analysis (e.g. early childcare attendance – AEDC – NAPLAN) or vulnerable population pathways analysis (e.g. CP – AEDC – JJ) via linkage.			
<a href="#">Australian Immunisation Register (AIR)</a>	The AIR is a national register that records vaccinations given to people of all ages in Australia. Recognised vaccination providers send their patient's immunisation details to the AIR.	Yes, the AIR has been linked for particular health projects. The AIR does not contain variables that allow it to directly be linked to other data sources. However, it does contain Medicare ID which allows it to be linked to MBS which could then be linked to other sources.	Yes. Linking the AIR to various vulnerable population data sets (e.g. CP or disability) may provide insight into whether certain populations are more/less likely to be fully vaccinated and therefore have implications for policy development.	Yes. PHN, SA3 and postcode data are available and has been used for reporting in <a href="#">Immunisation rates for children in 2016–17</a> .	The AIR is currently used to report on several Immunisation indicators in the Health domain.	
<a href="#">Australian Secondary School Students' Alcohol and Drug Survey (ASSAD)</a>	The ASSAD is a triennial national survey of licit and illicit substances use amongst Australian students aged 12–17. The first survey was conducted in 1984 and the most recent was conducted in 2017.	No, linkage is not possible.	Yes. Current indicators on alcohol and drug use are limited to alcohol and smoking. The ASSAD could be used as a data source for reporting on other drug use amongst children aged 12–17. The survey also includes questions about self-perception of use and personal experience of use which could be further examined for reporting subjective wellbeing indicators related to use.	No. Previous reports have not provided any geographical disaggregation.	ASSAD data are currently used to report on several substance use indicators in the Health domain.	
						
<a href="#">Census of Population and Housing (Census)</a>	The Census collects data on the key characteristics of people in Australia on Census night and the dwellings in which they live. This includes	Yes, the Census can be linked. The Census has previously been linked to multiple Education, Government payment,	Yes. Future Census collections could be used to collect a household information of relevance to child wellbeing.	Yes. Various geographical disaggregations are available, including SA1 and SA2.	Census data are currently used to report against indicators in the Social Support and Housing Domains.	

Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
	limited information on children aged under 15. The most recent Census was conducted in 2016—Australia's 17th national Census.	Health and Income and taxation data sources as part of the ABS led Multi-Agency Data Integration Project (MADIP).	Of particular interest, and currently being investigated for the next Census in 2021, is family functioning and questions related to family formation and shared care arrangements. There are opportunities to link Census data to other data sets to gain specific insight into specific populations, for example linking to education data to understand migrant population education outcomes or the household characteristics of the OOHC population.			  
Centrelink data sets – various	Data from Centrelink contain information on payments and services delivered by the Department Human Services on behalf of a number of Australian Government departments. Relevant customer groups: <ul style="list-style-type: none"> <li>the unemployed</li> <li>families</li> <li>parents</li> <li>carers</li> <li>people with disability</li> <li>Indigenous Australians</li> <li>People from diverse cultural and linguist backgrounds.</li> </ul>	A project is currently underway to examine welfare outcomes for young people who have experienced out-of-home care (OOHC), by linking (via SLK-581) state and territory OOHC data to a researchable linkable DSS Centrelink data asset DOMINO (Data Over Multiple Individual Occurrences). Other linkage projects using DOMINO are either underway or in the planning stages, many of which are potentially relevant, for example linking the DOMINO data set to the JJ NMDS to examine pathways for young people leaving youth justice supervision.	Yes. Centrelink data offers potential opportunities to gain an understanding of welfare dependence, particularly intergenerational dependence and vulnerable households, identified gaps under the Income and finance domain. Centrelink data can be used to examine broad indications of education, employment, health, justice and safety and family characteristics. Such as incidence of family, domestic and sexual violence by examining crisis payment data. When integrated with other cohort data it provides an opportunity to examine pathways across services and systems.	Dependent on data set. For example, the DSS payment information data set includes SA2, Local Government Area (LGA) and commonwealth electorate division data while DOMINO contains low level geographic data (meshblocks) suitable for using to report at the SA2 level, or higher.	Centrelink data are not currently used for reporting any indicators in the examined frameworks/indicator sets.	
Child Protection National Minimum Data	The CP NMDS contains data on children who come into contact with state and territory departments responsible for child protection including:	The CP NMDS has been linked (via the SLK-581) to several other data sources reviewed as part of this exercise, some of which	Yes. As a particularly vulnerable group of children, linkage of the CP NMDS with other data sets, such as homelessness,	Differs between states and territories. Some states and territories may be unlikely to consent to low-level reporting.	The CP NMDS is currently used to report on multiple indicators under several domains.	








Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
<a href="#">Set (CP NMDS)</a>	notifications, investigations and substantiations; care and protection orders; funded OOHC; and data for reporting on the National Standards for Out-of-Home Care.	have resulted in publications. <sup>3</sup> There are also several CP linkage projects which are ongoing and may result in publication or important learnings in the future.	Centrelink or Medicare Benefits Schedule, could help fill gaps in reporting indicators by this vulnerable population.			 
<a href="#">Childhood Education and Care Survey (CEaCS)</a>	The CEaCS is a triennial ABS survey that is conducted as a supplement to the ABS Labour Force Survey (LFS). The CEaCS collected information regarding types of care, attendance at educational institutions and informal learning activities for children aged 0–12 as well as parents care needs and education, income and working status/patterns. The most recent CEaCS was conducted in 2017.	Further information would be required to assess feasibility.	Limited. The CEaCS is already used to report on several indicators and other gaps of primary interest are likely to be better filled by data in the NECCEC. However, there may be some limited opportunities to improve reporting on areas such as informal care arrangements such as grandparent care.	Yes. Address information is collected and is available for reporting at 2 levels of remoteness (Major cities, other than major cities)	The CEaCS is currently used to report on several indicators under the Education domain.	
<a href="#">Community Housing Data Collection</a>	The Community Housing Data Collection contains information about community housing organisations, the dwellings and tenancy rental units they manage, households on the waiting list, and the tenants and households assisted. This includes data on children who are the main tenants of a household as well as the age of any child residing in a	The Community Housing Data Collection does not contain data suitable for linkage.	Limited. The Community Housing Data Collection could be used to report on the number of children who are the main tenant of a household and the number of children living in community housing as an additional tenant.	N/A	The Community Housing Data Collection is not currently used for reporting any indicators in the examined frameworks/indicator sets.	N/A

<sup>3</sup> [Vulnerable young people: interactions across homelessness, youth justice and child protection: 1 July 2011 to 30 June 2015](#)  
[Educational outcomes for children in care: linking 2013 child protection and NAPLAN data](#)  
[Young people in child protection and under youth justice supervision 2015–16](#)  
[Developing a linked data collection to report on the relationships between child protection and youth justice supervision](#)





Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
	household as an additional tenant.					
Disability Services National Minimum Data Set (DS NMDS) and National Disability Insurance Scheme (NDIS) data	The DS NMDS contains information on all disability support services provided under the National Disability Agreement (NDA), as well as records of all service users. Government-funded services have commonly been provided under NDA, but with the progressive introduction of the National Disability Insurance Scheme (NDIS) from 2013–14 many of these will progressively transition to the over time. As the NDIS is not yet fully rolled out., details of what data will be available for reporting purposes are yet to be decided.	While the DS NMDS has previously been linked to other data sources, it should be noted that it has undergone significant changes as a result of the introduction of the NDIS and therefore the DS NMDS is more appropriately used for historical purposes (pre 2013–14) or to look at transition of service users to the NDIS from 2013–14.	Yes. DS NMDS (or its NDIS successor) could be used to help improve the reporting of children with disability and/or their parent/carers. This could be done by linking to other child health and welfare data sets to help improve information about children with a disability. For example, linking the MBS with the NDIS to obtain information about health service use of children with disability.  The Australian Government, along with other stakeholders, is currently investigating the feasibility and impact of a National Disability Data Asset.	Yes. Various geographical disaggregations are available, including SA2 (noting that in the DS NMDS this is based on postcode concordance so has some limitations). In the past 3 levels of remoteness (Major cities, inner regional and outer regional/ remote) have been reported on.	The DS NMDS and NDIS data are not currently used for reporting any indicators in the examined frameworks/indicator sets. Currently reported disability related indicators use survey based data for reporting.	 
General Social Survey (GSS)	The ABS GSS collects information about personal and household characteristics for people aged 15 and over resident in private dwellings across Australia (excluding very remote and people living in discrete Aboriginal and Torres Strait Islander communities). The GSS is typically quadrennial, with the first survey being conducted in 2002. The most recent survey is currently in the field.  The main purpose of the survey is to provide an understanding of the multi-dimensional nature of relative advantage and disadvantage across the population, and to facilitate reporting on and	Further information would be required to assess feasibility.	Limited. GSS respondents are aged 15 years or over and often data collected via this survey is not relevant to children aged less than 15 specifically. However, the GSS could possibly fill some gaps in the Social support and the Justice and Safety Domains if questions were specifically targeted to address issues of relevance to households with children in them. For example, questions on cyber bullying could be considered.	Yes. Address information is collected and is available for reporting at 7 levels of remoteness (Major cities, inner regional, outer regional, remote, very remote, migratory – offshore – shipping and no usual address).	The GSS is currently used to report on indicators under the Justice and safety and Social support domain.	 




Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
	monitoring of people's opportunities to participate fully in society. Many of the key factors that influence an individual's social inclusion have been collected across the series of the GSS.					
<a href="#">Household, Income and Labour Dynamics in Australia (HILDA) Survey</a>	The HILDA Survey is a household-based longitudinal panel study that collects valuable information about economic and personal well-being, labour market dynamics and family life. HILDA has been running since 2001.	HILDA has previously been linked to the AIHW National Death Index (NDI). However, as this is an ongoing study, ethics would be required to access the identified data which is held separately to the main study data set by a third party field work provided (Roy Morgan).	Yes. The HILDA collects data on a range of family life topics which could be used to further supplement the social support domain. Further investigation would be required if there was interest in utilising further.	Yes. Address information is collected and is available for reporting at 5 levels of remoteness (Major cities, inner regional, outer regional, remote and migratory)	The HILDA is currently used to report on several indicators in the Social support domain.	  
<a href="#">Juvenile Justice National Minimum Data Set (JJ NMDS)</a>	The JJ NMDS contains data on all supervised orders (both community-based and detention) relating to young people under juvenile justice (JJ) supervision in Australia.	The JJ NMDS has been linked (via the SLK-581) to several other data sources listed in this table in the past. <sup>4</sup> There are also several ongoing linkage projects which are using the JJ NMDS, for example, a large multi-source ABS led National Crime and Justice Linkage Project.	Yes. To date, a substantial amount of work has focused on linkage between the CP NMDS and JJ NMDS data collections. As a particularly vulnerable group of children, there is the potential to link JJ data with other collections, such as Centrelink, to explore relationships between JJ and welfare dependence.	Yes. Postcode information is available but not necessarily used for reporting purposes.	The JJ NMDS is currently used to report on several indicators under the Justice and safety domain.	

<sup>4</sup> [Vulnerable young people: interactions across homelessness, youth justice and child protection: 1 July 2011 to 30 June 2015](#)  
[Educational outcomes for children in care: linking 2013 child protection and NAPLAN data](#)  
[Young people in child protection and under youth justice supervision 2015–16](#)  
[Developing a linked data collection to report on the relationships between child protection and youth justice supervision](#)






Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
Longitudinal Study of Australian Children (LSAC)	The LSAC collects information on physical and mental health, education, and social, cognitive and emotional development of two large cohorts of children (totaling >10,000 children at the outset of the study in 2003–04). The first cohort is known as the infant cohort (0–1 years in 2003–04) while the other cohort is known as the preschool cohort (4–5 years in 2003–04). Data are collected from both cohorts every 2 years with data being sourced from parents, child carers, pre-school and school teachers and the children themselves.	Yes, the LSAC can be linked. However, as LSAC is an ongoing study, utilisation of any identified unit record data, including for linkage purposes would require approval from the LSAC Governance Committee and the Australian Institute of Family Studies Ethics Committee. It would also require a waiver of consent or individual approval from all participants.	Limited. There are potential opportunities to fill gaps in children’s subjective wellbeing in several domains, including Health, Social support and Education. As parents are also interviewed, indicators in these same domains could also be reported from a parental perspective. However, the longitudinal nature of this study, drawing on data from two cohorts, limits the utility of the study to support ongoing population-level monitoring over time.	Yes. Appropriate sample sizes would be required to report below the state and territory level.	The LSAC is currently used to report on a family functioning indicator in the Social Support domain.	
						
						
Longitudinal Study of Indigenous Children (LSIC)	The LSIC is a sample-based national survey collects information on physical and mental health, education and social, cognitive and emotional development, as well as families, communities and services of two cohorts of Aboriginal and Torres Strait Islander children (totaling around 1,700 children at the outset of the study in 2008). The data are sourced from parents, child carers, pre-school and school teachers and the children themselves.	Yes, the LSIC can be linked. However, as LSIC is an ongoing study, utilisation of any identified unit record data, including for linkage purposes would require approval from the LSIC Governance Committee and the Department of Social Services Ethics Committee. It would also require a waiver of consent or individual approval from all participants.	Limited. There are potential opportunities to fill gaps in cultural identification and children’s subjective wellbeing in several domains, including Health, Social support and Education. As parents are also interviewed, indicators in these same domains could also be reported from a parental perspective. However, the longitudinal nature of this study, drawing on data from two cohorts, limits the utility of the study as it could not be used to report ongoing indicators over time.	Yes. Appropriate sample sizes would be required to report below the state and territory level.	The LSIC is not currently used for reporting any indicators in the examined frameworks/indicator sets.	
						
						
Medicare Benefits Schedule (MBS) data collection	The MBS data collection contains information on services that qualify for a benefit under the Health Insurance Act 1973 and for which a claim has been processed. Includes information about MBS claims	Yes, the MBS can be linked. There are many projects which have linked MBS data to other data sources for example projects considering service use	Yes. On its own, MBS data could be used to report more regularly on service utilisation for children. Through linkage to other data sets, MBS data are capable of gaining understanding (and patient	Yes. Postcode information is available but not necessarily used for reporting purposes.	The MBS data collection is not currently used for reporting any indicators in the examined frameworks/indicator sets.	










Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
	(including benefits paid), patients and service providers. AIHW can access data covering services provided from February 1984 to present.	patterns and cost for different disease groups.	pathway) of specific and/or vulnerable groups of children. For example, linking to the CP collection would help understand the services utilisation of this group of children.			
Multipurpose Household Survey (MPHS)	The ABS MPHS is a supplement to the ABS' monthly LFS and is run once each financial year. Respondents to the survey are 15 years or over. The MPHS collects information on a wide variety of household aspects, with topics/focus areas changing annually. In the past, the MPHS has included supplements on the household use of technology, family characteristics and transitions, and environmental views and behaviour. The MPHS was first run in 2004–05 and most recently 2017–18.	Further information would be required to assess feasibility.	Yes. The MPHS collects a wide range of data that could be used to supplement current data holdings on child wellbeing with respect to family characteristics and interactions, especially for the Social support and Income and finance domains. However, further investigation would be required as to its specific utility given that supplements are cyclical (e.g. the family characteristics and transitions supplement has recently ceased).	Yes. Address information is collected and data are reported at 6 levels of remoteness (Major cities, inner regional, outer regional, remote, very remote and migratory).	Various supplements of the MPHS have been used to report on indicators for the Social support and Income and finance domains in the past.	
						
National Aboriginal and Torres Strait Islander Social Survey (NATISS)	The ABS NATISS is a six-yearly multidimensional social survey which provides broad, self-reported information across key areas of social interest for Aboriginal and Torres Strait Islander people, primarily at the national level and by remoteness. Respondents to the survey were 15 years or over, but information was collected on all ages in surveyed households. The NATISS was first run in 1994 and most recently in 2014–15.	Further information would be required to assess feasibility.	Yes. The NATISS could be used to, in-part, to report on cultural identity amongst Aboriginal and Torres Strait Islander Australians. It could also possibly be used to supplement the GSS by providing Aboriginal and Torres Strait Islander data on a number of already reported indicators (drawing from GSS data) or potentially have specifically targeted questions added (as suggested for the GSS) on topics such as cyber bullying. However, the utility of the survey is limited as a result of the 6-year cycle.	Yes. Address information is collected and data are reported at 5 levels of remoteness (Major cities, inner regional, outer regional, remote and very remote).	The NATISS is not currently used for reporting any indicators in the examined frameworks/indicator sets.	
						





Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
<a href="#">National Assessment Program – Literacy and Numeracy (NAPLAN)</a>	NAPLAN is an annual national assessment of reading, writing, language conventions and numeracy for all students in Years 3, 5, 7, and 9.	The AIHW has previously linked NAPLAN data to the CP collection <sup>5</sup> . As well as this the ABS currently has a large linked data collection which, among other data sources, includes NAPLAN data (together with some early childhood education-related data sets).	Yes. NAPLAN is already used to report several indicators in the Education domain. It would be useful to report on these indicators for specific populations, for example children with a disability or who have contact with CP (through data linkage).	Yes. Full home address of student and the suburb of school location is collected.	NAPLAN data are currently used to report against indicators in the Education domain.	
<a href="#">National Community Mental Health Care (CMHC) Database</a>	The National CMHC Database contains service contact data at the patient level for specialised community mental health establishments in the public sector.	Yes, the National CMHC database has the potential to be linked. It has not been previously linked and does not have the variables required for linkage readily available (stored only by jurisdictions). Steps could be taken to obtain these variables if required.	Limited. Without linkage capabilities, the National CMHC database offers only limited opportunities, beyond reporting service utilisation for children.	Yes. Address information is collected. Data are reported at 5 levels of remoteness (Major cities, inner regional, outer regional, remote and very remote).	The National CMHC database is currently used to report on Community Mental Health Care contacts only.	
<a href="#">National (insulin treated) Diabetes register (NDR)</a>	The NDR is a de-identified data set of record all new cases of people who began to use insulin to treat their diabetes since 1 January 1999. The NDR includes people with type 1, type 2, gestational and other forms of diabetes. Data for the NDR are sourced from the National Diabetes Services Scheme (NDSS) and the Australasian Paediatric Endocrine Groups (APEG) state and territory registers. Both the NDSS and the APEG include identified unit record data.	The NDSS and APEG data are regularly linked to the National Death Index (NDI), an AIHW linkage asset, to flag anyone on the NDR who has died. In the past the NDSS has also been linked to other data sets for various health based research projects, including the a study that looked at Incidence of Type I Diabetes in Australian children before and after the introduction of Rotavirus Vaccine.	Yes. The NDR could potentially be linked to other data sets to examine the prevalence of diabetes among select child populations (e.g. children accessing disability services), or to consider service use patterns for children with diabetes.	Yes. Various geographical disaggregations are available, including PHN and SA3.	The NDR is used to report against new cases of insulin-dependent diabetes.	



<sup>5</sup> [Educational outcomes for children in care: linking 2013 child protection and NAPLAN data](#)






Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
National Drug Strategy Household Survey (NDSHS)	The NDSHS collects information on alcohol and tobacco consumption, and illicit drug use among the general population in Australia. It also surveys people's attitudes and perceptions relating to tobacco, alcohol and other drug use. The survey has been conducted every 2 to 3 years since 1985. The AIHW has been collating and reporting on these surveys since 1998. Between 2004 and 2016, children 12 years or older were included. The 2019 survey (currently in the field) only includes children aged 14 and older.	For the first time in 2016, SLK information was collected via self-completion by respondents. The SLK data still needs to be cleared for linkage use.	Limited. Currently ASSAD data are used to report against child (12–14 years) smoking and drinking indicators in the Health domain while NDSHS is used to report against young people and adult behaviour. In the future, linkage opportunities could be examined to see if tobacco, alcohol and other drug use is associated with specific past factors (e.g. contact with child protection, childhood disability) or future factors (e.g. contact with juvenile justice, mental health problems or welfare support).	Yes. Address data can be coded to the statistical area level 1 (SA1). However, data are generally published at the national level with a selection of data published at the State/Territory, Remoteness Area, SA4 and Primary Health Network levels.	The NDSHS is currently used to report against indicators in both the Health and Social support domains.	
						
						
National Early Childhood Education and Care Collection (NECECC)	The ABS NECECC has been established to provide nationally comparable statistics on early childhood education and care. The NECECC includes data about service providers, children, and where available workers.	The NECECC has in the past been linked by the ABS to other data sets on early childhood education attendance and outcomes.	Yes. The NECECC is already used to report on a number of indicators in the Education domain, but has the potential to be used to report on further disaggregations (e.g. SES, remoteness of provider location) as well as be used as part of pathways analysis via linkage. For example, linking the NECECC to AEDC could be one part in exploring educational pathways and outcomes of children.	Yes. Address information is collected and is available for reporting at 3 levels of remoteness (Major cities, inner/outer regional and remote/very remote).	The NECECC is currently used to report against multiple Education domain indicators.	
National Health Survey (NHS)	The ABS NHS was designed to collect a range of information about the health of Australians, including prevalence of long-term health conditions; health risk factors such as smoking, overweight and obesity, alcohol consumption and physical activity; and demographic and socioeconomic characteristics.	Further information would be required to assess feasibility.	Limited. The NHS is already well utilised – reporting on a wide range of indicators in the Health domain – but could be explored as an interim supplement for reporting on child mental health. While the NHS does collect some information on mental health, it does not have the depth	Yes. Address information is collected and is available for reporting at 3 levels of remoteness (Major cities, inner regional, outer regional/remote/very remote).	The NHS is currently used to report against multiple health domain indicators.	

Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
	The most recent NHS was collected in 2017–18.		required to fill this currently large gap. The NHS also collects some data on allergies and sleep.			
<a href="#">National Hospitals Data Collections</a>	Includes all major national hospitals data sets: <ul style="list-style-type: none"> <li>• National Hospital Morbidity Database (NHMD)</li> <li>• National Public Hospital Establishments Database (NPHEd)</li> <li>• National Non-admitted Patient Emergency Department Care Database (NNAPEDCD)</li> <li>• National Elective Surgery Waiting Times Data Collection (NESWTDC)</li> <li>• National Non-Admitted Patient Care (aggregate) Database (NNAP(agg)D)</li> <li>• National Non-admitted Patient (episode-level) Database (NNAP(e)D)</li> </ul> Some of the included data set contain episode-level records for patients while others provide establishment level data.	Yes, linkage of some of the national hospital data collections is possible.	Yes. Data linkage of hospital event data provides opportunities for filling current data gaps in regard to hospital utilisation, for example, it can tell us the number of children visiting hospitals, the frequency of visits for select children population groups (such as children with disability), and enhance information on the pathways through the health system, including hospital services.	Yes. SA2 data are collected. SA3 and PHN level data have been reported.	The National Hospital Morbidity Database is currently used to report against multiple Health domain indicators.	
<a href="#">National Mortality Database (NMD) and the National Death Index (NDI)</a>	The NMD and the NDI are both AIHW maintained data assets that contain information about deaths that occur in Australia. The NMD contains records for all deaths in Australia from 1964, including causes of death and demographic characteristics of the person. The NDI is a data base developed and maintained by the AIHW listing all deaths that have occurred in Australia	The NDI has been linked to a multitude of both internal AIHW data sets for regular reporting as well as to other external data sources for research purposes.	Yes. Linkage of the NDI to other linkage assets such as various vulnerable children population data sets (e.g. CP or JJ) could help provide information on the outcomes of children who have had contact with a particular system and/or service.	Yes. SA2 data are collected. SA3 and PHN level data have both previously been reported.	The NMD is currently used to report against multiple Health domain indicators.	

Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
	since 1980. It is an invaluable tool for epidemiologists and clinicians in following up research cohorts using record linkage.					
National Perinatal Data Collection (NPDC)	The NPDC is an AIHW maintained data asset that contains information on both live births and stillbirths, where gestational age is at least 20 weeks or birthweight is at least 400 grams.	The NPDC has not been previously linked and does not have the identifier variables required for linkage readily available (stored only by jurisdictions). The jurisdictional perinatal collections have been used in data linkage on a project basis. Arrangements for data linkage would need to be negotiated with each jurisdiction.	Limited opportunity. The NPDC is already used to report on multiple health domain indicators and without the addition of new variables (e.g. those relating to Fetal Alcohol Spectrum Disorder) or linkage capabilities, the NPDC offers no new opportunities.	Yes. SA2 data are collected. SA3 and PHN level data have both previously been reported.	The NPDC is currently used to report against multiple Health domain indicators.	
National Residential Mental Health Care (RMHC) Database	The National RMHC Database contains all episode-level records of residential care for residents in all government-funded mental health services and patient-level records of episodes of residential mental health care.	The National RMHC database has not been previously linked and does not have the variables required for linkage readily available (stored only by jurisdictions). Steps could be taken to obtain these variables if required.	Limited opportunity. Without linkage capabilities, the National RMHC database offers only limited opportunities beyond reporting service utilisation for children.	Yes. Address information is collected and is available for reporting at 3 levels of remoteness (Major cities, inner regional, outer regional/remote/very remote).	The National RMHC database is not currently used for reporting any indicators in the examined frameworks/indicator sets.	
Out-of-Home Care Survey	The national survey of children aged 8–17 in OOHC includes children's views on various topics, including feelings of safety, participation in decision-making, community connection and activity, family connection and contact, presence of a significant adult in their life, and leaving care.	The OOHC survey has not previously been linked but contains the variables required for linkage. Linking the OOHC survey to other health and welfare data assets would allow for a more in depth understanding of children living in OOHC and what other factors potentially impact their subjective view of wellbeing.	Yes. There may be value in considering whether the questions used in this survey, related to children's view on various topics, could be applicable to broader population, and potentially considered for use in other population surveys. Linking the OOHC survey to other health and welfare data assets would allow for a more in-depth understanding of children living in OOHC and what other factors potentially impact their subjective view of wellbeing.	Yes. Postcode information is available but not necessarily used for reporting purposes.	The OOHC survey is currently used to report a number of indicators in the Social support and Justice domains.	  

Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
			It should be noted that funding is not secured beyond the current (2018) survey.			
<a href="#">Pharmaceutical Benefits Scheme (PBS) data collection</a>	The PBS data collection contains information on prescription medicines that qualify for a benefit under the National Health Act 1953 and for which a claim has been processed. Includes information about PBS scripts and payments, patients, prescribers and dispensing pharmacies. AIHW can access data on subsidised prescriptions provided from July 2002 to present, and under co-payment prescriptions from April 2012.	Yes, the PBS can be linked. There have been many projects which have linked PBS data to other data sources, for example as part of the Coordination of Health Care Study designed to provide information on patients' experiences of coordination of care across Australia.	Yes. On its own, PBS data could be used to report more regularly on prescription medicines for children. Through linkage to other data sets, PBS data could provide insight into whether specific and/or vulnerable groups of children utilise certain types of medications more than others. For example, linking to the CP collection it might be possible to report whether rates of medication used in the treatment of behavioural or learning disorders are higher among these populations.	Yes. Postcode information is available but not necessarily used for reporting purposes.	PBS is not currently used for reporting any indicators in the examined frameworks/indicator sets.	
<a href="#">Prisoner Health Data Collection</a>	The Prisoner Health Data Collection contains demographic and health related data on prison entrants and prison discharges, as well as data on prisoners who visit a prison clinic, prisoners who are taking prescription medication while in custody, prison clinic services and staffing levels.	The Prisoner health data collection contains variables suitable for linkage, however it has not previously been linked to another data set and would need to be more fully investigated.	Limited/Future. Opportunities could be investigated in the future, including whether or not the collection would a suitable life-course pathway trajectory for certain child populations, for example difference in prisoner health based on child protection and juvenile justice system contact.	No. Only state/territory of prison available.	The Prisoner Health Data Collection is not currently used for reporting any indicators in the examined frameworks/indicator sets.	 
<a href="#">Program for International Student Assessment (PISA)</a>	PISA is an international assessment that occurs every three years measuring student performance in reading, mathematical and scientific literacy as applicable to real-life problems and settings. It also collects information on student background and motivation and attitudes towards learning.	No. Linkage is not possible.	Yes. PISA is currently used to report against indicators in the Education domain but may have further potential that could be explored with additional disaggregations, such as by economic disadvantage, immigration	Yes. State data and three broad levels of school remoteness are accessible (metropolitan, provincial and remote).	PISA data are currently used to report on several Education domain indicators.	


Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
	PISA is a random sample of 15-year-old students, drawn from a nationally representative sample of schools.		status, school sector or geographic location.			
<a href="#">Progress in International Reading and Literacy Study (PIRLS)</a> and <a href="#">Trends in International Mathematics and Science (TIMSS)</a>	PIRLS and TIMSS are comprehensive assessments of reading literacy and Mathematics and Science for students in Year 4, supported by extensive data about country, school and classroom learning environments. PIRLS has been conducted every five years since 2001, with Australia participating for the first time in 2011 and again in 2016. TIMSS reports every four years since 1995 and Australia has participated in all 6 cycles.	No. Linkage is not possible.	Yes. PIRLS and TIMSS are both currently used to report against indicators in the Education domain but have further potential that could be explored with respect to reporting by additional disaggregations, such as by economic disadvantage and student attendance. Student attendance in particular is not currently well reported in Australia and the data collected for these assessments could be examined as a potential proxy. PIRLS and TIMSS both also collect and report on bullying and its association with educational outcomes.	Yes. State data and three broad levels of school remoteness are accessible (metropolitan, regional and remote).	PIRLS and TIMSS data are currently used to report on several Education domain indicators.	
<a href="#">Public Housing (PH) and State Owned and Managed Indigenous Housing (SOMIH) Data Collection</a>	The PH and SOMIH Data Collection contains information about public rental housing and SOMIH dwellings, households assisted and households on the waiting list.	A linkage variable (SLK) has been added to this collection as of 2017-18. ACT and Victoria did not supply all relevant information to generate this variable. Completeness of this variable has not yet been tested.	Yes. This data set could be used to gain a better understanding of how many children are living in PH and SOMIH dwellings and provide a more rounded understanding of the housing domain as well as be an important aspect of an environment domain. Linkage to other vulnerable population data sets, such as CP or disability could show whether there is over-representation of these populations in PH and SOMIH.	Yes. Postcode information is collected.	The PH and SOMIH Data collection is not currently used for reporting any indicators in the examined frameworks/indicator sets.	

Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
<a href="#">Specialist Homelessness Services (SHS) Collection</a>	The SHSC contains information about people who are either homeless or at risk of homelessness and who are seeking services from specialist homelessness agencies.	A linkage variable (SLK) is available for all years of the SHS Collection (from 2011–12). The SHS collection has been linked to data sets such as AODTS NMDS, Juvenile Justice and Child Protection <sup>6</sup>	Yes. The SHS collection is already well utilised, but via linkage with other data sources it may possibly allow for reporting by specific vulnerable populations, for example, linking to disability data to enhance the quality of the currently held disability data in the SHS.	Yes. Various geographical disaggregations are available, including SA2. However, additional disaggregations at this level are limited.	The SHS collection is currently used to report on several Housing domain indicators.	
<a href="#">Survey of Disability Ageing and Carers (SDAC)</a>	The ABS SDAC is a triennial survey that amongst broader objectives, collects information of children with disabilities and their carers as well as children who are carers to others. The SDAC was first conducted in 1998 and most recently in 2015.	Potentially, however further information would be required to assess feasibility.	Yes. The SDAC has in the past collected information on disabilities and their consequent impacts (for example Autism and its impact on education) specifically relevant to children which are not already reported under the examined frameworks. Further investigation of specific items and their potential for child wellbeing reporting is required to fully assess potential.	Yes. The SDAC includes 3 levels of remoteness (Urban, rural and remote).	The SDAC is currently used to report against several indicators in the Health and Social support domains.	 
<a href="#">Survey of Income and Housing (SIH)</a>	The ABS SIH collected detailed information about the income, wealth and household characteristics of persons aged 15 and over in private dwellings throughout Australia (excluding very remote areas). SIH data has been used for	Potentially, however further information would be required to assess feasibility.	Yes. While the SIH is already used to report against various national indicators of child wellbeing, given the large scope of the survey there is potential to report by further disaggregations, such as	Yes. The SIH collects various levels of geography, including SA1 and SA4 but primarily reports by 2 remoteness levels (greater capital city area and rest of state).	The SIH is currently used to report against indicators in the Housing, Income and finance, and Employment domains.	 

<sup>6</sup> [Exploring drug treatment and homelessness in Australia: 1 July 2011 to 30 June 2014](#)

[Vulnerable young people: interactions across homelessness, youth justice and child protection: 1 July 2011 to 30 June 2015](#)



Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill data gap?	Geographical data available	Currently used for reporting	Domain
	reporting of poverty by the Australian Council of Social Services (ACOSS)		family composition, preschool/school attendance and geography.			
Time Use Survey (TUS)	The ABS TUS is an irregular national survey which collects information about how people use their time. The information is used to examine how people allocate time to activities such as paid and unpaid work and to analyse such issues as gender equality, care giving and balancing family and paid work responsibilities. The first national survey was conducted in 1992, and repeated in 1997 and 2006. The ABS plans to re-run a new iteration of this survey in the near future.	N/A would need to assess capability once available.	Yes. It is possible that the future ABS time use survey could provide a significant amount of insight into how much time children, parents and families spend on activities directly relevant a wide range of child wellbeing domains. For example, how much sleep children get, how much time parents spend out of the house at work, how much time families spend together sharing a meal or activity. It is possible that targeted questions could be added into a future iteration of the survey.	N/A would need to assess capability once availability.	N/A	N/A

### 3.1.2 Alternative data assets



Table 5 below is a summary of alternative and non-government data assets that were examined as part of a desktop review. Similar to Table 4, information is included on whether or not interrogation of the data set is likely to fill any identified national data gaps. The review of the data assets included in Table 5 found that Rumbles Quest, the Royal Children’s Hospital (RCH) Polls and the wellbeing and engagement collection are potentially some of the most likely to yield positive outputs if further resource investment was made with the aim of using them to fill data gaps. These are further explored in the development opportunities section below.













Table 5 also includes a number of jurisdictional data sources. While these sources do not provide national coverage, they could provide important guidance and learnings to any related developments at a national level, for example, through pre-defined metadata.




**Domain Key**

 Health  Social Support  Education  Justice & Safety  Housing  Income & Finance   Employment

**Table 5: Alternative data assets summary table**

Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill national data gap?	Geographical data available	Domain
<a href="#">Australian Aboriginal racial identity and self-esteem for 8–12 year old children (IRISE_C)</a>	The IRISE_C (Racial Identity and Self-Esteem of children) inventory was developed to explore the elements of racial identity and self-esteem of urban, rural and regional Aboriginal children.	N/A. The measure has recently been validated but there is currently no national or widespread collection of data established which would allow for assessment of data linkage possibilities.	Yes.  Further investigation could be undertaken to consider whether the IRISE_C could potentially be rolled out nationally and used to at least partially fill the existing data gaps in cultural identity. However, given the infancy of the measure, more in-depth investigation would be required.	Geographical data could be collected if rolled out nationally. The validation study of the instrument collected information on children's remoteness at 3 levels (urban, rural and regional) but not on locality.	
<a href="#">Australian Child Wellbeing Project (ACWP)</a>	The ACWP involved children's perspectives to design and conduct Australia's first major nationally representative and internationally comparable survey of wellbeing among children aged 8–14 years. The ACWP survey was rolled out to a national probability sample of students in Years 4, 6 and 8 and was successfully completed during Term 3 2014 in 180 schools across Australia. More than 5,400 students took part in the survey, which collected valuable information on various aspects of young people's wellbeing. The project included 6 phases over 4 years from 2012 to 2015.	No. Only anonymised UR data can be accessed with the right ethics.	Yes.  The ACWP offers potential to fill a large number of subjective wellbeing gaps. However, opportunities are limited as only one collection period has taken place (2014) to date. Funding is being sought to run the study again.	School based information is collected and could potentially be accessed in the future for this purpose.  If another iteration of the study were to take place, it might be possible to implement additional Geographical data collection with respect to student home address as opposed to school address.	
<a href="#">NSW Child Development Study (NSW-CDS)</a>	The NSW-CDS is a longitudinal study of child mental health and wellbeing in a cohort of children who were assessed using the Australian Early Development Census (AEDC) in 2009 and/or the Middle Childhood Survey (MCS) in 2015. The study aims to obtain good quality information about the development of this population cohort during early and middle childhood in order to map patterns of resilience and vulnerability for later life. The study is ongoing and has multiple waves using and linking additional data sets to the 2009 AEDC and 2015 MCS.	The NSW-CDS has been used to answer numerous research questions to date and has resulted in a large number of publications. Further details can be found at <a href="http://nsw-cds.com.au/publications">http://nsw-cds.com.au/publications</a>	No.  The NSW-CDS instead offers a good example of how large scale linkage of multiple data sets can be used to create a comprehensive picture of child wellbeing.  Data could potentially be used to provide insight into useful predictive indicators.	N/A	N/A

Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill national data gap?	Geographical data available	Domain
<a href="#">Rumble's Quest</a>	<p>Rumble's Quest is an integrated system of measurement which allows children to subjectively report their own feelings as they respond to questions about their life and experience across four important dimensions of child wellbeing:</p> <ul style="list-style-type: none"> <li>• Attachment to School</li> <li>• Self-regulation</li> <li>• Social Confidence and Positive Relationships</li> <li>• Supportive Home Relationships.</li> </ul>	No. Linkage is not possible.	<p>Yes.</p> <p>Rumble's Quest offers potential to fill a large number of subjective wellbeing gaps. Early reports of successful roll-out of Rumble's Quest suggest that uptake of the system has been high and developers hope to eventually achieve close to census uptake. Developers have shown early interest in potentially working with other contributors to establish a national data asset based on Rumble's Quest data.</p>	<p>Yes.</p> <p>If rolled out nationally the most suitable level of geographical data could be collected.</p>	   
<a href="#">Royal Children's Hospital (RCH) National Child Health Poll</a>	<p>The RCH National Child Health Poll is a quarterly, national survey of Australian households providing information on important issues in contemporary child and adolescent health – as told by the Australian public (specifically from the point of view of the parent). Each quarter a different topic or theme is the focus of the poll. The process for selecting poll topics is responsive to and informed by the national political and social agenda. For more detailed information, read about the <a href="#">poll survey methods</a>.</p>	No. Linkage is not possible.	<p>Yes. The surveys could potentially be utilised to help fill data gaps at the national level, if specific topic areas were included, such as body image, sleep and parenting. However, further disaggregation of results could be limited by sample size and responses would be from the parent's perspective.</p> <p>While the surveys all have a health focus, many of the topics also cross over into the Social support, Justice and safety, and Education and skills domains.</p>	No.	   
<a href="#">Social Emotional Wellbeing (SEW) study</a>	<p>The ACER SEW Survey offers schools the opportunity to survey their students and generate a report on a wide variety of social, emotional and behavioural outcomes of their student population.</p> <p>It is a confidential strength-based survey for students aged 3 to 18 years. The SEW Survey provides schools with information about their student population (whole school, specific year levels or targeted groups), which can be used to direct planning and problem-solving efforts. The survey</p>	No. Linkage is not possible.	<p>Yes. While there is not currently a national collection, between 2003 and 2017 more than 700 schools (government, independent and Catholic) used the SEW survey for one or more year levels and could be used to help fill a wide range of subjective wellbeing data gaps. However, as schools select to use the SEW survey there is an opportunity for results to be skewed.</p> <p>For more reliable results, suitable for indicator reporting, the SEW survey could be rolled out more broadly and more consistently across all age groups, state and territories and school sectors.</p>	<p>Only State level data are available at this stage. However, school based information is collected and could potentially be accessed in the future for this purpose.</p> <p>If it were rolled out nationally it might be possible to implement additional Geographical data collection with respect to student home address as opposed to school address.</p>	   

Name	Brief description	Linkage possibilities or relevant linkage work	Potential to fill national data gap?	Geographical data available	Domain
	was conducted over 15 years from 2003 to 2017.				
<a href="#">South Australian Early Childhood Data Project (SA ECDP)</a>	The SA ECDP is one of the most comprehensive population-based administrative research databases in Australia. It spans more than 30 different government administrative data sources and has been built over a number of years to include every birth cohort of South Australian children born from 1999–2013.	Various linkages were undertaken to create the database. SAECDP was recently linked to DOMINO.	No. The SA ECDP instead offers an example of the value of a comprehensive, ongoing linked administrative database to support research and evaluation.  Data could potentially be used to provide insight into useful predictive indicators. Related research also provides useful learnings for national analysis using linked data sources of a similar nature.	N/A	N/A
<a href="#">The wellbeing and engagement collection (WEC)</a>	The WEC is a survey developed and utilised in SA to collect information from students in years 4 to 9 about non-academic factors relevant to learning and participation, with the three main topic categories being: <ul style="list-style-type: none"> <li>• Social and emotional wellbeing</li> <li>• Physical health, lifestyles and after school activities</li> <li>• School relationships and engagement.</li> </ul>	In SA, the WEC has been linked to other collections to identify AEDC outcomes, NAPLAN performance, and school attendance.	Yes. The WEC could potentially be rolled out nationally (it is already used in other countries, including Dubai) and used to fill a number of existing data gaps in children's subjective wellbeing, including Health and Education domains. In particular, the WEC could be utilised to report on a child's subjective wellbeing.	Geographical data could be collected if rolled out nationally.	  
<a href="#">Various State and National Children's Commissioners and Guardians</a>	Various Children's Commissioners and Guardians within Australia have undertaken one-off projects looking at the 'voice of the child' (i.e. subjective view of wellbeing) as part of their work to help improve and ensure better services for all children. These projects vary, but some, such as the work undertaken by the QLD Commissioner to inform " <a href="#">This Place I call Home: The view of children and young people on growing up in Queensland</a> " included data collected from an online survey, workshops, focus groups and other activities.	Linkage capacity for individual data sources would need to be investigated further.	No. The various data collections and reports instead offers an example of a comprehensive administrative research database.  Related research also provides useful learnings for national analysis using linked data sources of a similar nature.	N/A	N/A

## 4 Key national and jurisdictional data linkage developments

Data linkage (also called data matching, data integration or record matching) is a process that allows users to combine information from multiple databases, while preserving privacy, to tell a much more powerful story than would be possible from a single source. Data linkage has in recent years cemented its place as an essential tool for creating increased understanding of data sources and the populations that they represent.

It is important to note that data linkage is always undertaken under rigorous security and privacy protocols, and within appropriate data governance frameworks, in order to create new data sets that allow novel analysis of the combined data. Data linkage is undertaken only within the parameters of strict data governance arrangements, such as legislation, data sharing agreements and authorisation, and ethics certification. For example, the AIHW is an accredited Commonwealth Data Integration Authority which means the AIHW has met stringent criteria covering project governance, capability, data management, and the protection of privacy and confidentiality. Linkage projects must be approved by the AIHW Ethics Committee and all relevant data custodians, and in many cases other relevant Ethics Committees. These data governance issues are further described in the [AIHW Data Governance Framework](#).

With respect to improving our understanding of children's wellbeing, data linkage can play a vital role in several ways:

- **Pathways analysis:** Linkage of two or more data sources can improve our understanding of how children transition during key development stages, interact with services, and their outcomes at different stages of their life. It can also help to identify those points throughout service delivery where intervention would be most effective. This provides the ability to compare patterns across areas or groups—for example, children with a disability, children in out-of-home care (OOHC)—and to evaluate aspects of services and/or policies.
- **Research and evaluation:** Data linkage can also be used to examine the relationship between outcomes and other (risk and protective) factors. Resultant analysis can provide insight on what services and/or interventions are more likely to be effective, inform selection and development of indicators (particularly predictive) for monitoring, and also inform predictive tools which could support more individualised service provision for future clients.
- **Methods and data quality improvement:** Linkage of two or more data sets can also be used to improve data quality and/or methods in a cost effective way. For example, linking a data set with reliable Indigenous identification to another data set where identification may be relatively uncertain could improve the quality and coverage of Indigenous data in the analysis overall. Data linkage can also be used to bring together data relating to select population groups, for example people with disability, where data on disability status may only be available on one of the data sources.

This section provides some examples of national and jurisdictional linkage developments which are relevant to the measurement of child wellbeing and/or the service delivery systems related to children.

## 4.1 Jurisdictional developments

Several states are utilising data linkage to enhance existing child wellbeing data sets: the [South Australian Early Childhood Data Project](#) (SA ECDP), the [Western Australian Telethon Kids Institute's Developmental Pathways Project](#) (WA DPP), and the [New South Wales Childhood Development Study](#) (NSW-CDS). These linkages enable researchers to draw out complex research questions, to examine pathways of child health and wellbeing, and to determine the risk and protective factors associated with positive childhood development. The projects link a wide range of data related to child health and development, pregnancy and births, maternal health, Aboriginal and Torres Strait Islander health, disabilities, autism, dental health, hospital admissions, child protection and OOH, mental health, injuries and self-harm, education, juvenile offending, and public housing. In each of these projects, data from the [Australian Early Development Census](#) (AEDC), a national progress measure designed to gauge Australian children's development status in their first year of full-time schooling, has been linked to government administrative data. Inclusion of the AEDC has facilitated research into the pathways leading to early developmental vulnerability and is helping to inform the development of policies and programs for early intervention.

There are a number of similarities between each of the linkage projects. The SA ECDP and WA DPP aim to investigate child-, family- and community-level risk and protective factors involved in child and youth developmental outcomes. These projects focus on identifying where early interventions may help reduce social and health disadvantage in adulthood, and aim to develop an evidence-base to inform child-focused policy and program development and evaluation. The NSW-CDS, while similar in its design and objectives, has a sharper focus on the developmental pathways associated with childhood mental health and wellbeing. The NSW-CDS is a longitudinal data linkage study of a population cohort of 87,000 children entering their first year of school in 2009. The project links administrative data with cross-sectional assessments (that is AEDC) and surveys of mental health, creating an evidence base to inform policy and community action to improve the mental health and wellbeing of Australian children and adolescents. The NSW-CDS is also multigenerational, linking data related to the health, mental health, justice system involvement, education and child protection contact of both the child and their parents.

Studies utilising the linked data sets from these projects have identified a number of risk factors associated with early developmental vulnerability (as measured by the AEDC) including parental mental illness and criminal offending, perinatal characteristics including parental smoking and occupation, child chronic illness and obesity, hospital admission for infection, exposure to disease, maltreatment and child protection involvement, gestational age, and maternal age. These results highlight the range of health and wellbeing trajectories that can be identified using comprehensive linked data sets.

In Victoria, the Murdoch Children's Research Institute, in collaboration with key partners, is currently developing the [Generation Victoria](#) (Gen V). This project intends to harness data, with participant's consent, from a range of existing collections, including health and education, across the life course, and aims to support research questions related to children's health, development and wellbeing.

## 4.2 National developments

At the national level, data linkage is increasingly being used to bring together a range of health and welfare data. This approach creates more people-centred data, and data which better supports multi-sectoral approach to policy and program development and evaluation. The AIHW has undertaken a range of data linkage at the national level to enhance the reporting capabilities of existing data sets regarding the health and wellbeing of Australians. For example, linked child protection, youth justice and specialist homelessness data show how exposure to more than one service is associated with increased risk of mental health issues, substance misuse issues, and domestic and family violence (relevant reports are noted in the data assets table). The AIHW has also developed a linked collection of child protection and AEDC data from selected jurisdictions. If regularly updated, this could facilitate routine reporting on the developmental outcomes of children in contact with child protection. Additionally, the AIHW is currently working with Australian Government and state/territory partners to explore the capabilities of the DSS Centrelink research data asset Data Over Multiple Individual Occurrences (DOMINO) asset, to explore welfare dependency for children transitioning from OOHC.

The emergence of new national data assets, such as the National Integrated Health Services Information Analysis Asset (NIHSI AA), which contains de-identified data from MBS, PBS, hospital services (selected states) and residential aged care, may provide opportunities for examining the health service use patterns of children in future. Other relevant data linkage developments include work underway to pilot a new National Disability Data Asset and data linkage developments in relation to cancer and diabetes. There is growing potential to link data across sectors such health, education, income support, child protection and disability services, to explore pathways across sectors and outcomes for different cohorts such as children. In the longer run, such data could provide insight on the use of mainstream services by children with disability or education outcomes for children who required long-term intensive care at birth.

These types of linked data can further assist in identifying key predictive factors known to lead to better or worse outcomes, strengthening the evidence about which predictive factors are most important to routinely monitor.



## 5 Key reporting gaps

In recent years, a number of major data gaps in health and welfare overall have been identified which apply to the child wellbeing landscape (AIHW 2019f). These include, but are not limited to:

- the ability to measure meaningful outcomes for people who receive health and welfare services
- the ability to measure and track unmet demand for services
- the availability of prevalence data (for example, Australians who experience child abuse and neglect)
- the availability of data to measure pathways and transitions within and across different service types and across jurisdictions.

This section provides a preliminary summary of key gaps and/or limitations in national reporting of child wellbeing, drawing on existing publications and the work undertaken for this paper. In developing the content, a number of factors have been considered, including the national representativeness, quality and frequency of available data assets and/or the presence of national indicators. It is expected that this material will continue to evolve and expand as a result of further stakeholder discussions, for example discussions with representatives on the AIHW Child Information Advisory Group. Potential opportunities for development in these areas will be further explored later in the report.

### 5.1 Current gaps in national reporting of child wellbeing

While analysis in Section 3 shows the breadth and depth of existing data assets relating to children and their wellbeing, there are a number of gaps and/or limitations. Some of these are overarching and impact the quality of reporting against all (or most) of the domains, and some relate to more specific topics and/or indicators.

#### 5.1.1 Overarching gaps

##### Population groups and issues of equity

The importance of reporting data for various population groups, especially vulnerable population groups, has been well documented in key documents related to child wellbeing, (for example, the Royal Australasian College of Physicians' [Inequities in Child Health](#); and the [Healthy Safe and Thriving: National Strategic Framework for Child and Youth Health](#)) and is critical to informing matters of equity.

Among existing data assets there are a range of population groups for which data are not readily available, including: children of refugee and asylum seeker families; children from culturally and linguistically diverse backgrounds or children born overseas; children living in OOHC; incarcerated children and young people; and children with disability.

In addition, there are also some gaps regarding data reported by geographic location or age group. For example:

- There is variation in the quality and consistency of the geographic unit/s (for example, postcode, Statistical Local Area 2) available on data sets which impacts the extent of geographic reporting possible.
- While most administrative data collections include data on all ages where this aligns with their purpose, not all national population surveys collect data for children, for example, respondents to the ABS General Social Survey are aged 15 or over.
- Geographic data may relate to the location of the service rather than the location of the child's residence.
- Several factors combine to make geographically-based reporting difficult in some cases despite the availability of granular geographical information. For example, data may not be presented for confidentiality reasons, or because the data are not considered statistically robust for comparative purposes; for example, the underlying population is too small.

### **Voice of the child**

There are several published reports which provide information on child wellbeing through the 'voice of the child'. These include reports published by the National Children's Commissioner, as well as several jurisdictional children commissioners, other collaborations, such as the Australian Child Wellbeing project, and the AIHW's survey on children's experiences of out-of-home care experiences. These reports provide useful insight, however, there would be value in having data collected from the child's perspective nationally, in a more standardised way, and on a regular basis.

Current national data assets used in ongoing reporting are predominately administrative (based on service delivery by-product information) and survey-based (in which case generally administered to people aged 15+ or 18+). This means that measures of children's subjective wellbeing, including their cultural and racial identity, are very limited among these sources.

### **Health and community services**

Health and community (welfare) services funded and delivered by governments, private providers, or NGOs provide a range of support to children, families and caregivers, for example, domestic and sexual violence services, family support services, allied health care, and financial support.

Data provided by the above services are not routinely and/or consistently available at a national level, although data on specific services which receive a government subsidy are usually recorded in the relevant Australian government data collections; for example, Medicare or the National Disability Insurance Scheme (NDIS). Greater access to data relating to the above services would provide a more complete picture of service utilisation across Australia, including patient pathways, and also support more accurate assessment of the unmet demand of services. This is likely to be more important as the capacity to join up data grows and clients are provided with more opportunities to choose service providers, under government-funded programs.

Some relevant national data development work is currently being considered in the context of Aboriginal and Torres Strait Islander children in OOH and accessibility of family support services.

## Pathways and transitions

There are currently no national indicators to describe transitions of children through major developmental or life stages; for example, from secondary school to work and/or further education, or the interaction of children with services, for example the support services children with child protection receive over time.

### 5.1.2 Topic and indicator-specific gaps

Table 6 provides a summary of current topic gaps in the national, ongoing reporting of child wellbeing against each of the 7 AIHW people-centred domains as well as the additional domain, 'Other sectors and contextual factors'. Many of the identified gaps are due to the long-standing absence of a suitable national data asset and/or indicator which support national population-level monitoring over time, however, there are also a number of topic areas listed which could be considered 'emergent'. These emergent topic areas reflect contemporary issues that have arisen as a result of changes to societal, cultural or family functioning and/or understanding and include topic areas influenced by technology (for example, device and social media usage and cyberbullying) and those based on the child's subjective point of view.

National data and indicators on specific topics are valuable, but the value of these data are greatly increased if data are able to be disaggregated by population groups and small geographic areas, to support examination of variation and/or inequities by group or place (see above). Data linkage also provides the opportunity to develop new, informative indicators which may fill a topic gap, or enhance understanding of an existing topic where limited data exist. For example, instead of separately measuring the proportion of children currently in child protection and youth justice, linkage enables measurement of the proportion of all children who are in both systems. With additional years of data from both systems, it will be possible to routinely measure the rate at which children in child protection go on to be involved in the youth justice sector.

Another important contextual factor is the changing nature and understanding of family formation, including who makes up a family and the relationships that exist within that family. The ABS has recently commenced exploring the definitions of family across its full suite of surveys and data sources. This includes plans to update their Time Use Survey.

The relative priority of these gaps, and identification of further gaps, would be an ideal topic for future consultation/workshops.

The information provided below is intended as a starting point for further consideration. Options have not been assessed in terms of their feasibility.

**Table 6: Summary of current gaps and/or limitations in national reporting of child wellbeing**

Domain	Topic area	Comments
Health	Fetal Alcohol Spectrum Disorder (FASD)	Accurate national information about incidence and prevalence is not available. This will be particularly important to inform progress against the National FAS Strategic Action Plan released by the Australian Government in 2018 ( <a href="#">link</a> ). The importance of capturing information about FASD was also noted in the Royal Commission into the Detention and Protection of Children in the Northern Territory, in recognition of its high prevalence in this vulnerable group. FASD may be a useful predictive indicator.

Domain	Topic area	Comments
	Device and social media usage	May include indicators on unsupervised device and social media usage and how often device usage impacts daily routines or activities. Potential data source options include the ABS Time Use survey, which would support more regular, ongoing reporting, and/or additional targeted questions in surveys such as the Royal Children's Hospital (RCH) polls for one-off insight. Relevant national data development related to this area could draw on existing questions used in the Longitudinal Study of Australian Children (LSAC), for example.
	Body image	May include indicators on personal body image and how often body image is a topic discussed in friendship groups. Potential data source options include additional questions in surveys such as the NHS, or the wellbeing and engagement collection (WEC) (if nationally rolled out). Relevant national data development related to this area could draw on existing questions used in the Longitudinal Study of Australian Children (LSAC), for example.
	Mental health	There is no ongoing funding for the Young Minds Matter survey, conducted in 2013–14. The National Health Survey, collected every 3–4 years, provides some information on mental health conditions of children, but not to the same detail of the other two surveys.
	Sleep	Could include development of indicators on amount of sleep, quality of sleep and factors that impact sleep. Some data on children's sleep were collected in the 2011–12 National Health Survey only. Potential data source options include re-introduction of questions on sleep in the NHS, inclusion of questions in the ABS Time use Survey, or additional targeted questions in surveys such as RCH polls for one-off insight Existing relevant data collected in LSAC could also be considered.
	Genetic risk factors	There are potential future opportunities here with the emerging work on genomics and specifically the plans to collect genetic information with consent from participants in the GenV study (see above on data linkage). Appropriate indicators would need consideration at a later date. These data may be more suited to informing service delivery and people-centred care rather than national population-level reporting.
	Neonatal screening	National indicators to support neonatal hearing screening in Australia exist, however these have not been reported to date, and state and territory data vary in consistency and coverage. In 2018, the Australian Government, and states and territories committed to improved reporting of this topic.
	Medical technology and devices	There is an emerging government interest in the utilisation of medical technology and devices. Indicators could include looking at the prevalence of certain device usage amongst children, for example the use of continuous glucose monitoring or insulin pumps.
	Children's subjective view of health	May include indicators on personal perspective of health versus parental or professional view. Potential data source options include the WEC (if nationally rolled out). Additional targeted questions in surveys such as LSAC could also be considered, depending on information needs.
Social support	Parenting	<p>May include indicators on parent/child activities and interactions and, the impact of single parent homes. Potential data source options include additional targeted questions in surveys a new ABS Time Use survey, or RCH polls for one-off insight.</p> <p>Factors that increase the risk of poor parenting are of particular interest. For example, data on children exposed to domestic violence are very limited; some national data on parental mental health, and/or parental alcohol and other drug problems are available.</p> <p>Parenting is a complex and difficult-to-measure topic and further investigation would be required.</p>
	Family functioning	While there are some national data on aspects of family functioning, there are some information gaps. For example, national data on children in shared care is very limited, and there is no nationally representative estimate of the number of children in these arrangements or, the proportion of time each child is spending with each parent. The ABS is currently working on options to improve this, potentially by collecting relevant information in the 2021 Census.

Domain	Topic area	Comments
	Play	There is evidence to show the benefits of unstructured play without strict time restrictions for children. The ABS Time Use Survey could be a potential data source, particularly if the age for which information was collected was expanded to include people aged under 15.
	Extracurricular activities	Children can further develop their social networks through participating in activities outside the home and school. The AusPlay survey is a potential source for children participating in sport, and information on participation in other extracurricular activities such as music, language or dance may possibly be captured by the ABS Time Use Survey if the age for which information was collected was expanded to include people aged under 15.
	Cultural identity	May include indicators on personal sense of cultural identity and the factors the impact connection to culture. Indigenous cultural identity is of particular interest and the National Aboriginal and Torres Strait Islander Social Survey could be a potential data source. Further investigation would be required. Other potential options include consideration of the Australian Aboriginal racial identity and self-esteem survey for 8–12 year old children (IRISE_C) at a national level.
	Children's subjective view of general wellbeing and social support	May include a wide range of indicators on how children personally view their wellbeing, their community involvement and topics relating to family and community functioning. More specific subjective topics, such as sexuality and gender identity, fall under this topic area. Potential data source options include Rumble's Quest (if rolled out nationally) or additional targeted questions in surveys such as RCH polls for one-off insight.
Justice and safety	Bullying (including cyber bullying)	While some national information is available, there are no national, ongoing reported data and no nationally agreed indicator. In December 2018, the <a href="#">Council of Australian Governments</a> specifically noted the damaging effect of bullying on children and young people. See also, Unfair treatment at school, including bullying (below).
	Child abuse and neglect	There are currently no national prevalence data for child abuse and neglect, with current national data on this topic related to the child protection population only. However, the first national study of child maltreatment in Australia: prevalence, health outcomes, and burden of disease was funded in the 2018 National Health and Medical Research Council Grant round. This survey is likely to be in the field 2021, and the intention is that it would be funded every 4–5 years.
	Children's subjective view of safety	May include indicators similar to those collected for the National Standards for Out-of-Home Care but for the broader population (for example how safe a child feels at home or at school). Potential data source is Rumble's Quest (if nationally rolled out).
Housing	Impact of physical address	May include indicators on the impact physical address has on child's wellbeing (for example school catchment zones, distance from school). Potential data source options include Rumble's Quest (if nationally rolled out) which collects geographic information and child's wellbeing information.
	Children's subjective view of housing	May include indicators on how well the child's physical housing meets their daily needs. Potential data source options include targeted questions in new cross sectional surveys. Additional questions in LSAC could also be considered depending on information needs.
Education and skills	School expulsions and suspensions	No national data source available. These data would be particularly interesting for vulnerable populations (for example, Indigenous, low SES, out-of-home care (OOHC)).
	School attendance	This topic is currently included in several of the frameworks reviewed. The data are available, but not for all sectors and not in an easily accessible form.
	Unfair treatment at school, including bullying	While some national information is available (for example Rumble's Quest and WEC), there are no national, ongoing reported data. See Bullying above also.
	Children's subjective view of school	May include indicators on personal attachment to school, for example. Questions used in alternative data sources, for example Rumble's Quest and WEC, could inform any national data development.

Domain	Topic area	Comments
Income and finance	Vulnerable households	Income vulnerability is an emergent area of interest and may include children living in households where income support payments are the sole source of income or where crisis payments or breach of activity testing has occurred. The impacts of these factors on child wellbeing could potentially be explored through linkage of appropriate household income/welfare data sources to a select measure of child wellbeing. Could also be further linked to data sources related to vulnerable population groups (for example OOHC or disability) for best insight. This is a complex and difficult-to-measure topic and further investigation would be required.
	Children's subjective view of family income and finance	May include indicators on how children view their family financial situation and the impact it has on their wellbeing. LSAC includes some subjective information on financial hardship with respect to things that have happened to the child within the last 12 months because of shortage of money, for example gone without meals, didn't get medicine or got to the doctor when needed to. These could potentially inform national data and indicator development.
Employment	Parental underemployment	An appropriate data source/s would require further consideration. Analysis of data for specific vulnerable groups would be particularly important.
	Children's subjective view of family employment	May include indicators on how employment status within the family impacts them, type of work parents do and whether a child would like to see their parents work more or less and why.
Other Sectors and contextual factors	Built environment	May include indicators on housing density, and access to parks and community spaces, public transport and safe roads and pathways.
	Natural environment	May include indicators on the quality of the natural environment, for example air and water quality.
	Social environment	May include indicators on access to community organisations, level of neighbourhood attachment and crime rates.
	Service availability	May include indicators on the quantity, quality, access and coordination of services.
	Community governance	May include indicators on citizen engagement, leadership and quality decision-making within the community, and implementation and effectiveness of changes in the community.

## 6 Options for enhanced children’s wellbeing reporting

The expectations of individual readers and data users has changed significantly in recent years with increased demand for data flexibility and visual engagement. As a result, indicator reporting has expanded beyond simply stating numbers and rates to including reports in various formats, infographics, interactive charts and maps, and supporting access to the underlying data (either in spreadsheet or data cube format available publicly, or via a research project where more detailed data can be provided following ethics and data custodian approval). The type of reporting selected requires careful consideration of the underlying purpose and the intended audience.

How data and, more specifically, indicators are reported can have a significant impact on interpretation. Reporting data and indicators by finely-grained geographical areas and in a manner which allows for a narrative to be attached, can be beneficial to policymakers and advocacy groups as it can help identify areas of disadvantage and support and evaluate policy and/or program responses.

The information provided here is meant to act as a guide to the various contemporary options for geographic and narrative indicator reporting. The specific software applications used to report indicators in a narrative manner have not been considered.

### 6.1 Geographical reporting

Data which can be presented at a range of geographic levels provide the opportunity for users to understand and interrogate different policy and research questions, applicable to different areas and/or populations. Reporting by lower geography levels can provide insight on potential variation which can be masked by higher-level reporting. Government agencies as well as NGOs, such as TBS, have highlighted the need to optimise reporting by different, and particularly lower geographic levels.

The extent to which data can be reported at a more granular level will be dependent on the spatial information available in the collection, and this varies across data sets. Data sets with address or very small area information—for example, Statistical Area 1 (SA1) — will provide the best basis for comprehensive geographical reporting.

Visually presenting indicators either on a static map alongside other relevant information (for example policy implementation or a different time period) or on an interactive map is a useful way to report on indicators as it can quickly and easily tell a story that is relevant to the user. There are a number of ways geographic visualisations are used to provide insight on child wellbeing and/or to inform the delivery of child and family services. These include visualisations which present:

- Measures relevant to children and/or their families.
  - For example, to demonstrate geographical variation in outcomes, such as education results. This approach is extremely common (see Table 7 for some examples).
- Coverage of service locations.
  - For example, the location and distribution of services across Australia can be represented, see AIHW’s report on [Aboriginal and Torres Strait Islander health organisations](#).

- Comparisons across similar geographic areas.
  - For example, the [Australian Atlas of Healthcare Variation](#) series, co-produced by the Australian Commission on Safety and Quality in Healthcare and AIHW, groups local areas into categories with similar remoteness and socioeconomic characteristics, to support more meaningful comparisons. This type of approach stimulates discussions about why some areas appear to be doing better than others, and the strengths and limitations of different service delivery models, policies and/or practices.

For data presented geographically, the concept of layering data is also useful. This functionality provides a more comprehensive profile of an area by visually layering different data over the same geographic region to improve interpretation. For example, it is far more meaningful to interpret results of health intervention alongside prevalence, or users may wish to view the results of an indicator in the context of socio-economic status. In addition, with the development and use of more technology, there are increasing opportunities to explore the presentation of client pathways visually; for example, to present comparisons of pathways for different population groups in a specific area.

Depending on the data collection, geographical information is often reported below the state and territory level. Table 7 below includes some examples of publically available geographic reporting relevant to child wellbeing. For further AIHW examples, see [AIHW data by geography](#).

**Table 7: Some examples of more granular reporting at various levels**

Geographic level	Description	Examples
Postcode	<p>Postcodes can vary in size and population, with postcodes for more remote areas tending to be geographically larger but less populous. Postcodes are not used by the ABS as a way to geographically report data as the factors that impact the boundaries are based on the operational efficiency for mail delivery rather than for statistical purpose.</p> <p>The Telethon Kids Institute Suicide maps are one of very few examples of postcode reporting and come with a very clear warning on interpreting the data and statistics it reports.</p>	<p><a href="#">Telethon Kids Institute Suicide maps</a></p>
SA1/SA2	<p>Reporting by SA1 and SA2 provide highly granular views, however data are rarely publically reported at these levels due to their small populations, with SA1 reporting generally reserved for Census data.</p> <p>The population of an SA1 ranges from 200 to 400 people, and from 3,000 to 25,000 for an SA2.</p>	<p><a href="#">Census</a></p> <p><a href="#">The Western Australian Child Development Atlas</a> (currently in testing phase, maps are not currently available to the public)</p>
SA3	<p>SA3 level clusters several SA2s with similar regional characteristics together and is perhaps the most commonly reported geography as it is recommended by the ABS for most types of geographic reporting.</p> <p>The population of an SA3 ranges from 30,000 to 130,000 people and while it does not offer the same level of fine detail as SA1 or SA2, it provides a good middle ground between detailed and robust reporting.</p>	<p><a href="#">Child and Maternal Health in 2014-16</a></p> <p><a href="#">An interactive insight into overweight &amp; obesity in Australia</a></p> <p>Morbidity (for example <a href="#">Potentially preventable hospitalisations in Australia by small geographic areas</a>)</p> <p>Mortality (for example <a href="#">Mortality Over Regions and Time (MORT) books</a>)</p>

*(continued)*



**Table 7 (continued): Some examples of more granular reporting at various levels**

SA4	Rarely used beyond reporting of the ABS Labour Force Survey, SA4 would be unlikely to serve a purpose for child wellbeing reporting as it often clusters several SA3s together which may have disparate characteristics.  The population of an SA4 ranges from 100,000 people to 500,000 with regional areas having lower populations in comparison to metropolitan areas.	<a href="#">Specialist homelessness services annual report 2017-18</a>
Primary Health Network (PHN) area	A PHN area is a group of organisations that connect health services across a specific geographic area (which is smaller depending on population density and consequent service numbers). As such, reporting by PHN in more densely populated states such as NSW provides more useful levels of detail when compared with WA, which has a significantly smaller population spread over a much larger geographic area.	<a href="#">Indigenous health check (MBS) data tool</a> <a href="#">Population Health Information</a> <a href="#">Development Unit Social Health Atlases</a>

There has also been increasing interest in reporting Indigenous data by areas which are more meaningful to Indigenous Australians. The ABS has a 3-level Indigenous Structure which provides a geographical standard for the publication of statistics about the Aboriginal and Torres Strait Islander population of Australia. This structure includes 57 defined Indigenous regions throughout Australia. An example of reporting which utilises this structure is the AIHW report, [Spatial variation in Aboriginal and Torres Strait Islander women's access to 4 types of maternal health services](#).

In some cases, data collections may have the geographical information available to support more granular reporting but these data are not generally presented for confidentiality reasons, or because the data are not considered statistically robust for comparative purposes, for example the underlying population is too small. The accuracy of any geographic reporting will be dependent on the quality of the underlying geographic data available in the collection, and this should be taken into account when determining which level of geography is reported. For some collections, where more granular data are available, there are increasing opportunities for approved users to access and analyse data via secure access environments.

### 6.1.1 Relevant data source opportunities

A number of the survey collections that were examined as part of the alternative data assets section appear to be reportable at a reasonably granular geographical level. For example, Rumble's Quest originated as part of the [pathways to prevention](#) project designed to target children in disadvantaged areas and aimed to improve life outcomes and help prevent contact with the youth justice system. A major part of this project was being able to identify areas of most disadvantage and target them with appropriate programs. As such, geographic data are routinely collected as part of Rumble's Quest. However, as with all of the alternative data assets that collect geographic data, further investigation would be required to establish whether this data could be publically reported.

## 6.2 Narrative reporting

The reporting of indicators in a way that allows a clear story to be told can allow the results to be more readily used to support advocacy and the development of policy responses. A desktop review of relevant contemporary indicator reporting has found several different options for reporting indicators in a narrative form, summarised below.

## 6.2.1 Dashboards

Dashboards are a common way for reporting indicators in an easy to view snapshot. While some offer interactive features that allow users to specify certain parameters of the data they wish to view this is not always the case. For an indicator dashboard to be a good narrative reporting tool it needs to be user friendly and allow the user to easily establish the meaning of the number or figures that are being presented. This may be achieved by the addition of achievement flags and relevant accompanying text.

The Productivity Commission's [Performance Reporting Dashboard](#) is a good example of an indicator dashboard that provides a clear narrative by accompanying the various indicator results with relevant policy information (that is, the agreement the indicators were developed for), achievement flags (that is, 'Improving', 'On track', 'Not on track', or 'Negative change') and the factors that influence the results of the indicator.

## 6.2.2 Text-based reports, including online format

These products are a highly flexible way of telling a data story and are regularly used for topic specific, linkage and survey-based reporting of indicators in the child wellbeing space. Some good examples of this type of reporting which are able to go beyond facts and create a narrative include:

- *Australia's children (forthcoming)*
- [Australia's Health 2018](#)
- [Australia's welfare 2019](#)
- [Young Minds Matter: Child and Adolescent Mental Health and Educational Outcomes](#)
- NSW Family & Community Services report of [Child maltreatment in early childhood: developmental vulnerability on the AEDC](#)

Increasingly, text reports are no longer printed in hard copy, with electronic pdf versions, or direct online content only available. Online reporting improves the timeliness of data and information which can be provided, with products being able to be released in sections (or a tranche) as data become available. An example of this type of reporting is the RCH Poll. While the RCH Polls do not report on indicators and all the topics reported are discrete topics, the end result of presenting the whole series of short reports together is a picture of the contemporary issues that are impacting the health and development of Australian children. There are also many AIHW examples; for example, [Mental Health Services in Australia](#). The AIHW's Australia's Children report (AIHW forthcoming) will also follow this format.

## 6.2.3 Video presentation

Short video presentations can be used as a way to clearly provide data as well as context and would be a useful way of reporting indicators in a narrative manner. An example of this style of reporting is the [Young Minds Matter – Snapshot of findings](#) video found on the [Young Minds Matter](#) homepage. This type of presentation can also be pitched directly at children of specific ages, which is important for reporting in this area.

# 7 Development opportunities

From a national perspective, a number of development opportunities have been identified in relation to: data and information, data linkage, and reporting. These include opportunities at a national level to enhance the measurement of wellbeing, but also for NGOs and other organisations, working with children and their families.

## 7.1 Data and information development opportunities

Potential opportunities exist to improve overarching reporting gaps, such as information on population groups, as well as the availability of data on specific topics.

### 7.1.1 Improving information on population groups and inequity

While some national data relating to children is able to be disaggregated by remoteness, socioeconomic status and, to varying degrees, culturally and linguistically diverse groups, data relating to other sub-population groups discussed in this report are limited. Several different approaches can be used to improve this, such as: expanding the data collected in existing collections (for example, adding a disability flag to a national minimum data set), adopting appropriate sampling techniques to ensure that data on small population groups can be reliably reported in national population surveys (for example, the ABS General Social Survey), or linking two or more data sources, where one source has data identifying the population group of interest (for example, linking the MBS with the NDIS to obtain information about health service use of children with disability, or the Census with education data to obtain insight on education outcomes for migrants). The collection of data relating to sub-population groups should also be seen as a priority for national digital initiatives, such as My Health Record.

More granular geographic reporting will also provide greater insight on variation across areas and inform discussion on inequity. Many national data assets (for example, ABS surveys, Centrelink) contain detailed geographic information (such as address) but data at very low levels are not routinely provided to analysts or available for reporting for privacy issues. Wherever possible, the release of data at the lowest, safest level should be encouraged, as should the release of data coded to the Australian Statistical Geography Standard, rather than non-statistical categories, such as postcode (as currently occurs for MBS data). In addition, the use of secure access portals, which allow access to data to approved users only, is a potential way for supporting analysis of data at lower geographic areas.

### 7.1.2 Improving indicators

Data linkage provides the opportunity to develop and report new indicators at a national level which provide enhanced insight on individual domains related to children's wellbeing and/or their interaction. For example, instead of separately reporting the proportion of children currently in child protection, and children who use homelessness services, linkage enables measurement of the proportion of all children who were in child protection who go on to be require homelessness services. Such linkages have been undertaken for specific projects, but could be routinely reported nationally.

Another example of linkage for indicator purposes is the linkage of the AEDC and the CP NMDS to form a new ongoing collection (currently in progress at the AIHW). This new collection allows for the reporting of the proportion of young children in contact with child

protection who are developmentally vulnerable (as measured by the AEDC) during their first year of full-time school. Monitoring how this measure changes over time will inform planning, policy and services related to child protection.

There are also topics, such as vulnerable households, where data linkage could potentially support a more comprehensive indicator. For example, rather than just using one source, such as Centrelink, this data source could be linked with other sources which include information on other factors associated with vulnerability, for example homelessness, interaction with the justice system or other broad environmental factors.

In addition, there may have been new developments in relevant areas; for example, new research published, and/or the emergence of new data sources, which could inform the revision of existing national indicators.

### 7.1.3 Improving information on topics

Section 5 of this report summarised a number of topics for which regular, national reporting is limited, or not available. Table 8 outlines potential development opportunities for some of these topics. These options include harnessing existing alternative or national data assets; for example, there may be relevant measures and metadata in alternative data asset which could be considered for inclusion in national data assets, or existing national data assets could be expanded to include new data items.

**Table 8: Development opportunities – topic based**

Area for Development	Opportunity
Subjective wellbeing	<p><u>Alternative data assets:</u> Rumble’s Quest and the wellbeing and engagement collection (WEC) both offer opportunities for enhancing reporting of children’s subjective wellbeing. Further investigation of whether these collections, or components of them, could be rolled out nationally would be useful.</p> <p><u>National data assets:</u> The Longitudinal Study of Australian Children offers opportunities for reporting on subjective wellbeing and how it changes over time for specific individuals. However, it is not necessarily a suitable ongoing indicator reporting source for wellbeing of the whole population due to it being a longitudinal study of an already defined cohort.</p> <p>A greater understanding of children and/or parents and families experience of service would also be beneficial. There are a wide range of validated survey tools that could be used to help guide development of relevant client experience surveys, including the Australian Hospital Patient Experience Question Set (AHPEQS), Mental Health Carer Experience Survey and the Your Experience of Service (YES) Survey. In the health sector, work is currently underway to integrate patient reported experience measures. Learnings from this experience could also be relevant to collecting information on children’s experience with services.</p>
Mental health	<p><u>National data assets:</u> There is no ongoing funding for the Young Minds Matter survey, conducted in 2013–14. The establishment of a routine, consistent, data source for comprehensively monitoring children’s mental health over time would be beneficial. The National Health Survey, collected every 3-4 years, provides some information on the mental health of children, but not to the same detail as either of the above surveys.</p>
Emergent topics	<p><u>New data asset:</u> There are several emergent topics that currently have no national, ongoing data source. Data for some topics could potentially be sourced by adding specific questions/data items into pre-existing data assets, and in some cases development of relevant indicators would be required.</p>

*(continued)*

**Table 8 (continued): Development opportunities – topic based**

Area for Development	Opportunity
Emergent topics (continued)	<p>Topic areas where national data are not regularly available include: sleep, device and social media usage, and cyberbullying, although some national data are available to provide one-off insight on several of these areas; for example, sleep and device usage. Research and alternative data sources (for example, the Royal Children’s Hospital Polls) may have existing questions which could be utilised in any development work</p> <p><u>New data asset:</u> There are several emergent topics that currently have no national, ongoing data source. Data for some topics could potentially be sourced by adding specific questions/data items into pre-existing data assets, and in some cases development of relevant indicators would be required. Topic areas where national data are not regularly available include: sleep, device and social media usage, and cyberbullying, although some national data are available to provide one-off insight on several of these areas, for example sleep and device usage. Research and alternative data sources (for example the Royal Children’s Hospital Polls) may have existing questions which could be utilised in any development work.</p> <p><u>National data assets:</u> The ABS Time Use survey is scheduled to be conducted in 2020 and 2027. This survey has the potential to provide some insight into parenting (for example time spent with family and device use).</p>
Cultural identity	<p><u>Alternative data assets:</u> The Australian Aboriginal racial identity and self-esteem inventory for 8–12 year old children (IRISE_C) is potentially a usefully measure for understanding cultural identity amongst children, but further investigation would be required to assess feasibility of this measure being used nationally.</p> <p>It may be possible to add targeted questions about cultural identity to Rumble’s Quest or the WEC, which could look at a broader spectrum of children, particularly if rolled out nationally.</p> <p><u>National data assets:</u> The National Aboriginal and Torres Strait Islander Social Survey (NATSISS) is currently used to report on a range of measures under the term Community functioning in the Health Performance Framework. This term covers measures related to the following themes: Connectedness to country, land and history; Resilience; Leadership; Having a role, structure and routine; Feeling safe; and Vitality. However, not all these measures are available for children. The NATSISS also collects information on children on a range of cultural issues (including language, and identification with a clan/group/tribe) which could be further investigated. The addition of targeted questions to the next release of this survey (expected 2020/2021) could also be examined, for example increasing the age range for which some questions are asked.</p>
Environment	<p>The <a href="#">Kids in Communities Study</a> provides a basis for the role the environment can play in child wellbeing as well as indicator development in this space. Further investigation would be required in all topic areas to establish appropriate national data sources.</p>

The AIHW, through involvement with national information committees, including ABS information committees, has the opportunity to discuss and promote the need for some of the above development opportunities to be considered. For example, there would be opportunities to request additional data items to be considered for inclusion in future ABS Time Use surveys, or for specific questions to apply to children aged under 15 years. There may also be potential opportunities through future work related to the [National Action Plan for Children’s Health 2020–2030](#).

## 7.2 Data linkage opportunities

In addition to the linkage opportunities outlined above, there are some more general linkage opportunities which could be relevant to NGOs:

- Client data could be linked with other national, state and/or service data to provide improved insight for service delivery and policy, including service evaluation. Some potential examples are provided below:
  - Meaningful longer term outcomes of clients, such as education results, could be measured by linking client data with NAPLAN data.
  - Outcomes for clients receiving a specific service could be compared with clients receiving the same/similar service in different organisations to inform discussions about best practice, and external benchmarking.
  - The association between specific client outcome service measures measured at the time of service, and longer term outcomes, could be assessed.
- Organisations could individually, or in partnership with other agencies such as the AIHW, develop research projects to explore areas of interest using existing national information infrastructure. For example, linked health and welfare collections could provide a more comprehensive picture of the overall wellbeing of children in ‘service catchment areas’ so as to better understand demand for services, and/or areas of entrenched disadvantage.
- Research findings from published state and/or national linkages which are relevant to the work of NGOs will continue to assist in service planning and delivery by strengthening the evidence base used by these organisations to inform their service delivery and optimise the positive impact that their services have on clients.

## 7.3 Reporting opportunities

A sophisticated national data and reporting platform which supports the collation, presentation and sharing of people-centred data about children, across multiple domains, and according to place or location would inform a wide range of information needs related to children’s wellbeing in Australia. Ideally, the platform would support users to search for information by either geographic location or subjects (domains and topics). In addition, the user would have the opportunity to view:

- geographic data at a high level, for example child mortality for Australia over time, or a local level; for example, child mortality in a specific Primary Health Network
- high-level ‘summary’ or ‘core’ indicators for each domain; for example, child mortality, or additional related indicators; for example, infant mortality, or select cause of death data
- different metrics for each indicator; for example, counts and rates to support both service planning and comparative analysis
- links to other relevant information and/or publications/websites which are relevant to content.

In addition, the platform could also provide a gateway for linking users through to relevant data assets publicly available for interrogation and analysis, or to other data assets only available to ‘approved’ users via secure portal arrangements. This type of platform also provides the opportunity for alternative data sources, only relevant to specific population groups or geographies, to be available if appropriate governance and security arrangements are agreed.

# Appendix A: Commonalities across national frameworks and indicators—additional information

**Table A1: Data assets used to report current National Frameworks by Domain**

Health	Social support	Justice and safety	Housing	Education and skills	Income and finance	Employment
National Perinatal Data Collection	ABS General Social Survey	ABS General Social Survey	ABS Census of population and housing	ABS Childhood Education and Care Survey (CEaCS)	ABS Survey of Income and Housing (SIH)	ABS Survey of Income and housing (SIH)
AIHW National Drug Strategy Household Survey	Longitudinal Study of Australian Children (LSAC)	Australian Child Wellbeing Project (ACWP) data	ABS Survey of Income and Housing (SIH)	ABS National Early Childhood Education and Care Collection	ABS Multipurpose Household Survey (MPHS) <Family Characteristics and transitions supplement>	
National Mortality Database	AIHW Child Protection Data Collection	AIHW Child Protection Data Collection	AIHW Specialist Homelessness Services data collection	Australian Early Development Census (AEDC)		
ABS National Health Survey	ABS Survey of Disability Ageing and Carers (SDAC)	ABS Multipurpose Household Survey (MPHS) <Family Characteristics and transitions supplement>		National Assessment Program-Literacy and Numeracy (NAPLAN)		
Australian Immunisation Register	AIHW National Drug Strategy Household Survey	Out-of-Home Care (OOHC) survey		AIHW Child Protection Data Collection		
National Diabetes Register	ABS 2016 Census of population and housing	AIHW Juvenile Justice National Minimum Data Set (JJ NMDS)		ACER Progress in International Reading Literacy Study (PIRLS)		
AIHW Australian Cancer Database (ACD)	Out-of-Home Care (OOHC) survey	AIHW Juvenile Justice NMDS		Program for International Student Assessment (PISA)		
Child Dental Health Survey (discontinued)	Household, Income and Labour Dynamics in Australia (HILDA) Survey	ABS Personal Safety survey		Trends in International Mathematics and Science Study (TIMSS)		

Health	Social support	Justice and safety	Housing	Education and skills	Income and finance	Employment
The National Child Oral Health Study		ABS Recorded crimes—victims (a compilation of data from administrative systems collected and maintained by police agencies across Australia)		Australian Curriculum, Assessment and Reporting Authority (ACARA) National Student Attendance Data Collection		
ABS Survey of Disability Ageing and Carers (SDAC)				Australian Children's Education & Care Quality Authority (ACECQA) National Quality Standard data		
National Hospital Morbidity collection						
National Community Mental Health Care (CMHC) Database						
Australian Child Wellbeing Project (ACWP) data						
Private Psychiatric Hospital Data Reporting and Analysis Service (previously Private Mental Health Alliance Centralised Data Management Service)						
Australian Institute of Criminology (AIC) National Homicide Monitoring Program						
Australian Secondary School Students' Alcohol and Drug Survey (ASSAD)						
Bureau of Infrastructure, Transport and Regional Economics Australian Road Deaths Database						



Health	Social support	Justice and safety	Housing	Education and skills	Income and finance	Employment
Mental Health of Children and Adolescents Survey (NB: includes Strength and Difficulties Questionnaire (SDQ) measure)						

# Abbreviations

ACWP	Australian Child Wellbeing Project
AEDC	Australian Early Development Census
AIHW	Australian Institute of Health and Welfare
APOAC	A Picture of Australia's Children
ARACY	Australian Research Alliance for Children & Youth
CAFS	Children and Families Secretaries
CHI	Children's Headline Indicators
HPF	Aboriginal and Torres Strait Islander Health Performance Framework
HST	Healthy, Safe and Thriving Framework
LSAC	Longitudinal Survey of Australian Children
NFPAC	National Framework for Protecting Australia's Children
NHA	National Healthcare Agreement
NIRA	National Indigenous Reform Agreement
NSW-CDS	NSW Child Development Study
OOHC	out-of-home care
RCH	Royal Children's Hospital
SA ECDP	SA Early Childhood Data Project
TBS	The Benevolent Society
WA DPP	WA Developmental Pathways Project
WEC	The wellbeing and engagement collection

# Glossary

**Aboriginal or Torres Strait Islander:** A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also **Indigenous**.

**administrative data collection:** A data set that results from the information collected for the purposes of delivering a service or paying the provider of the service. This type of collection is usually complete (that is, all in-scope events are collected), but it may not be fully suitable for population-level analysis because the data are collected primarily for an administrative purpose.

**Australian Statistical Geography Standard:** Common framework defined by the Australian Bureau of Statistics for collecting and disseminating geographically classified statistics.

**care and protection order:** Legal order or arrangement that gives child protection departments some responsibility for a child's welfare. The level of responsibility varies with the type of order or arrangement. These orders include guardianship and custody orders, third-party parental responsibility orders, supervisory orders, interim and temporary orders, and other administrative arrangements.

**Centrelink:** A program of the Australian government administered through the Department of Human Services, and is a key component of **Australia's social security system**. Centrelink delivers a range of government payments and services for retirees, the unemployed, families, carers, parents, people with disability, Indigenous Australians, and people from diverse cultural and linguistic backgrounds.

**children in contact with the child protection system:** Children who are the subjects of an investigation of a **notification**; on a **care and protection order**; and/or in **out-of-home care**.

**data linkage:** The bringing together (linking) of information from two or more different data sources that are believed to relate to the same entity; for example, the same individual or the same institution. This linkage can provide more information about the entity and, in certain cases, provide a time sequence, helping to 'tell a story', show 'pathways' and perhaps unravel cause and effect. The term is used synonymously with 'record linkage' and 'data integration'.

**disability:** An umbrella term for any or all of: an impairment of body structure or function, a limitation in activities, or a restriction in participation. Disability is a multidimensional concept, and is considered as an interaction between health conditions and personal and environmental factors.

**family:** Two or more persons, one of whom is aged at least 15, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually living in the same household. Each separately identified couple relationship, lone parent to child relationship or other blood relationship forms the basis of a family. Some households contain more than one family.

**Indicator:** An indicator is a key statistical measure selected to help describe (indicate) a situation concisely, track progress and performance, and act as a guide to decision making

**Indigenous:** A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also **Aboriginal or Torres Strait Islander**.

**infant:** Child under 1 year of age.

**Investigation (child protection):** The process whereby the relevant child protection department obtains more detailed information about a child who is the subject of a notification received. Departmental staff assess the harm or degree of harm to the child and their protective needs. An investigation includes sighting or interviewing the child where it is practical to do so.

**notification (child protection):** Contact made to an authorised department by people or other bodies alleging child abuse or neglect, child maltreatment or harm to a child.

**out-of-home care:** Overnight care for children aged 0–17, where the state makes a financial payment or where a financial payment has been offered but has been declined by the carer.

**socioeconomic position:** An indication of how ‘well off’ a person or group is. In this report, socioeconomic groups are mostly reported using the Socio-Economic Indexes for Areas, typically for five groups (quintiles), from the most disadvantaged (worst off or lowest socioeconomic group) to the least disadvantaged (best off or highest socioeconomic group).

**substantiations (child protection):** Substantiations of notifications received during the current reporting year are child protection notifications made to relevant authorities between 1 July and 30 June, which were investigated and the investigation was finalised by 31 August of the reporting period, and where it was concluded that there was reasonable cause to believe that the child had been, was being, or was likely to be, abused, neglected or otherwise harmed. Substantiation does not necessarily require sufficient evidence for a successful prosecution and does not imply that treatment or case management was provided. Substantiations may also include cases where there is no suitable caregiver, such as when children have been abandoned or their parents are deceased.

**youth justice:** The youth justice system is the set of processes and practices for managing children and young people who have committed, or allegedly committed, an offence. In Australia, it deals primarily with young people aged 10–17 at the time of the offence, although there are some variations among the states and territories. A major component of the system is the supervision of young people in the community or in detention.

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This discussion paper scopes opportunities for enhancing measurement of child wellbeing. It provides a preliminary summary of the current national child wellbeing data and reporting landscape, identified key data gaps and opportunities for development.

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