Australian Health Ministers' Conference

Community and Disability Services Ministers' Conference

THE CHILD HEALTH AND WELLBEING REFORM INITIATIVE

HEADLINE INDICATORS FOR CHILDREN'S HEALTH, DEVELOPMENT AND WELLBEING

Prepared by the Victorian Government Department of Human Services on behalf of the Australian Health Ministers' Conference and the Community and Disability Services Ministers' Conference

June 2006

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This report builds on significant recent Australian work undertaken in the field of children's health, development and wellbeing indicators, reporting and measurement. Notably, the contents of this report rely heavily on the work documented in the following publications and reports:

- Australian Council for Children and Parenting, *A Picture of Australia's Children National Workshop Report*[1];
- AIHW, *A Picture of Australia's Children*[2];
- AIHW unpublished work on indicators of child health, development and wellbeing[3];
- ABS, *Draft National Children and Youth Information Development Plan*[4]; and
- Office for Children and Youth, Western Australia (WA) Department for Community Development, unpublished work on *Wellbeing Indicators of Western Australia's Children and Youth*[5].

The Headline Indicators project was undertaken by the Statewide Outcomes Branch, Office for Children, Department of Human Services (DHS) Victoria.

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The project was supported by Dr Ronelle Hutchinson, Senior Program Analyst and Project Manager – Headline Indicators Project.

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Abbreviations

ABS	Australian Bureau of Statistics
ACCAP	Australian Council for Children and Parenting
ACIR	Australian Childhood Immunisation Register
ACT	Australian Capital Territory
AEDI	Australian Early Development Index
AESOC	Australian Education System Officials Committee
AHMAC	Australian Health Ministers' Advisory Council
AHMC	Australian Health Ministers' Conference
AIFS	Australian Institute of Family Studies
AIHW	Australian Institute of Health and Welfare
ASGC	Australian Standard Geographical Classification
BMI	Body Mass Index
BMJ	British Medical Journal
CALD	Culturally and linguistically diverse
CATI TRG	Computer Assisted Telephone Interviewing Technical Reference Group
CDSMAC	Community and Disability Services Ministers' Advisory Council
CDSMC	Community and Disability Services Ministers' Conference
CHILD	Child Health Indicators of Life and Development
CHIP	Child Health Intergovernmental Partnership
COAG	Council of Australian Governments
CSDWG	Children Services Data Working Group
CSMAC	Community Services Ministers' Advisory Council
CSNMDS	Children's Service National Minimum Data Set
DEST	Australian Government Department of Education, Science and Training
DHS	Department of Human Services
DMFT/dmft	Decayed, Missing, Filled Teeth
DoHA	Australian Government Department of Health and Ageing
FACS	Australian Government Department of Family and Community Services
FaCSIA	Australian Government Department of Family, Community Services and Indigenous Affairs
Hib	Haemophilus Influenza type B
HDSC	Health Data Standards Committee
HRAWG	Health Reform Agenda Working Group
ICD	International Classification of Diseases
LSAC	Growing up in Australia: The longitudinal study of Australian Children
LSIC	Footprints in Time: The longitudinal study of Indigenous children
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
NAGATSIHID	National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data
NATSIHC	National Aboriginal and Torres Strait Islander Health Council
NCIRS	National Centre for Immunisation Research and Surveillance
NCSDWG	National Community Services Data Working Group
NCPASS	National Child Protection and Support Services
NCSIMG	National Community Services Information Management Group
NDA	National Disability Administrators
NHIG	National Health Information Group
NHMRC	National Health and Medical Research Council
NMDS	National Minimum Data Set
NPHIWG	National Public Health Information Working Group
NISU	National Injury Surveillance Unit

NPHP	National Public Health Partnership
NPSU	National Perinatal Statistics Unit
NSW	New South Wales
NT	Northern Territory
NZ	New Zealand
PHOFA	Public Health Outcome Funding Agreements
PMRT	Performance Measurement and Reporting Taskforce
QLD	Queensland
RRMA	Rural, Remote and Metropolitan Areas
SA	South Australia
SEIFA	Socio-Economic Indexes for Area
SIMC	Statistical Information Management Committee
TAS	Tasmania
UK	United Kingdom
VIC	Victoria
WA	Western Australia
WHA	Women's Hospitals Australasia
WHO	World Health Organisation

Executive Summary

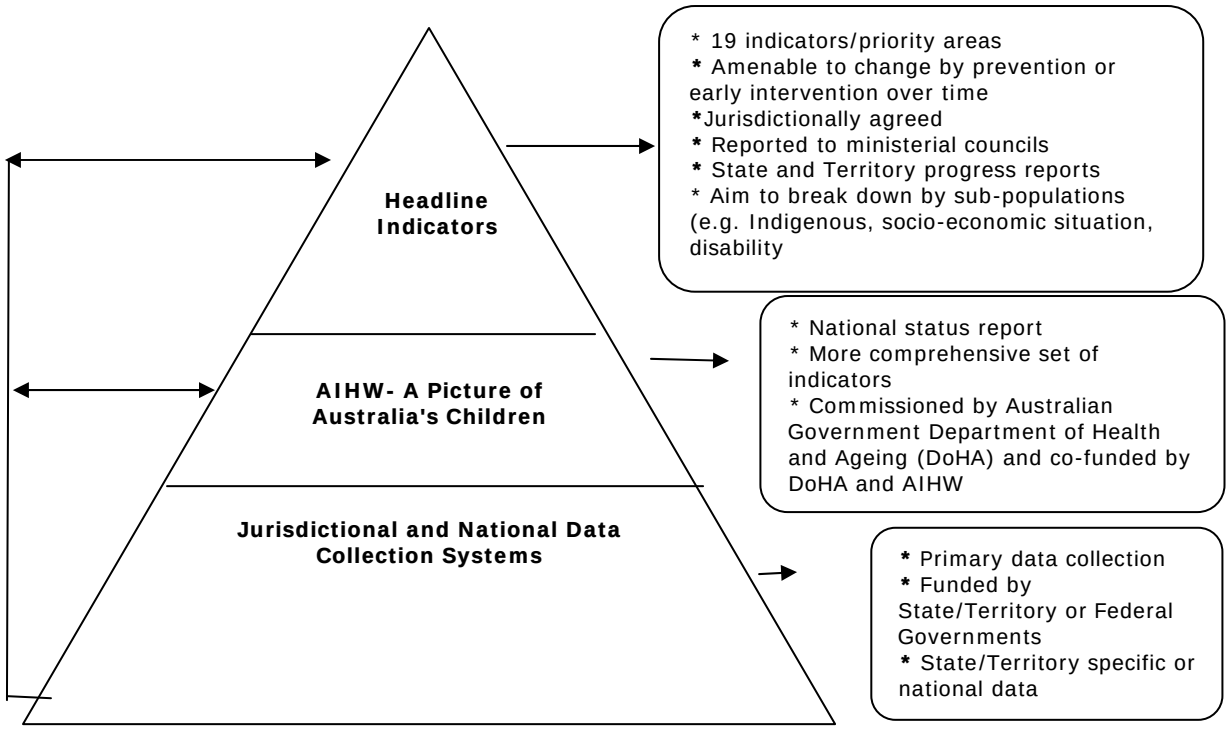
In 2005, the Australian Health Ministers' Conference (AHMC) and the Community and Disability Services Ministers' Conference (CDSMC) approved a project to develop a set of national, jurisdictionally agreed Headline Indicators to monitor the health, development and wellbeing of Australian children and to explore processes to facilitate ongoing data collation, analysis and reporting through a program to support Headline Indicators. This is one of four projects within the Child Health and Wellbeing Reform Initiative (led by the Northern Territory [NT]), aimed to improve child health, development and wellbeing. The Child Health and Wellbeing Subcommittee is committed to overseeing this work, and other projects begun under the Child Health Reform Initiative Project, since the disbanding of the National Public Health Partnership and Child and Youth Health Intergovernmental Partnership (CHIP). Informed by the emerging priorities of the Council of Australian Governments (COAG) and Australian Health Ministers' Conference (AHMC), the Subcommittee has a national leadership role in promoting and advocating for child health, development and wellbeing.

Understanding Headline Indicators

These Headline Indicators are designed to focus the policy attention of Governments on a set of priority issues for children's health, development and wellbeing through comparison of State and Territory data, and data from sub-populations of children including children with a disability, children from culturally and linguistically diverse (CALD) backgrounds, children living in disadvantage, and Aboriginal and Torres Strait Islander children. They are a mechanism to assist policy and planning by measuring progress on a set of indicators that are potentially amenable to change over time by prevention or early intervention.

The Headline Indicators build on the work of many groups reporting on aspects of children's health, development and wellbeing. Most notably, as indicators they emerge from the Australian Institute of Health and Welfare's *A Picture of Australia's Children [http://www.aihw.gov.au/publications/index.cfm/title/10127]*, which reports national data on a more comprehensive set of indicators across children's health, development and wellbeing. The establishment of Headline Indicators extends this work to report jurisdictional (rather than national) and sub-population data on a limited set of indicators, linking data to policy efforts across Australia. Figure 1 outlines the potential bidirectional relationship between Headline Indicators, *A Picture of Australia's Children,* and data already being collected across Australia through jurisdictional and federal processes.

Figure 1. Inter-relationships between the Headline Indicators, current national reporting on children's indicators and jurisdictional data collections



Priority areas and indicators

Following a review of the national and international work in this area, and two rounds of national consultation, 19 priority areas of health, development and wellbeing were identified for children aged 0-12 years. The consultations involved the health, community services and education sectors in each jurisdiction, and national data groups from each sector. For most of these priority areas, specific indicators have been proposed; however, for a small number, a robust indicator could not be determined. In addition, for a number of indicators the quality of existing information, issues around definition and possible data sources require further developmental work.

Priority Areas	Headline Indicators
Smoking in Pregnancy	Proportion of women who smoked during the first 20 weeks of pregnancy*
Infant Mortality	Mortality rate for infants less than one year of age
Birth Weight	Proportion of live-born infants of low birth weight
Breastfeeding	Proportion of infants exclusively breast fed at 4 months of age
Immunisation	Proportion of children on the Australian Childhood Immunisation Register who are fully immunised at 2 years of age
Overweight and Obesity	Proportion of children whose body mass index (BMI) score is above the international cut-off points for 'overweight' and 'obese' for their age and sex*
Dental Health	Mean number of decayed, missing or filled teeth (dmft/DMFT) among primary school children*
Social and Emotional Wellbeing	INDICATOR TO BE IDENTIFIED AND DEVELOPED
Injuries	Age-specific death rates from all injuries for children aged 0-4, 5-9 and 10-14 years
Attending Early Childhood Education Programs	Proportion of children attending an early educational program in the two years before beginning primary school
Transition to Primary School	Proportion of children entering school with basic skills for life and learning*
Attendance at Primary School	Attendance rate of children at primary school
Literacy	Proportion of primary school children who achieve the literacy benchmark*
Numeracy	Proportion of primary school children who achieve the numeracy benchmark*
Teenage Births	Age-specific fertility rate for 15-19 year old women
Family Economic Situation	Average real equivalised disposable household income for households with children in the 2nd and 3rd income deciles*
Shelter	INDICATOR TO BE IDENTIFIED AND DEVELOPED
Child Abuse and Neglect	Rate of children aged 0-12, who were the subject of child protection substantiation in a given year
Family Social Network	INDICATOR TO BE IDENTIFIED AND DEVELOPED

* Further refinement to indicator, denominator and numerator may be needed before reporting

A program to support Headline Indicators

It is important to note that a program to support Headline Indicators will not only produce a statistical report, but will also facilitate ongoing active coordination and collaboration with all jurisdictions to improve the quality, consistency and availability of information on Australian children. A program to support Headline Indicators will assist each jurisdiction to monitor progress on issues of most policy relevance to improving children's health, development and wellbeing.

Through the national consultations, four functions were identified as important for a program to support Headline Indicators:

1. Providing national leadership and coordination with existing data initiatives
2. Facilitating data development activities
3. Data management
4. Reporting of data for Headline Indicators

1. Background

Policy context

In recent years several initiatives have focused policy attention on improving, measuring and monitoring the health, development and wellbeing of Australia's children. Such initiatives include the *draft National Agenda for Early Childhood*[6], the [http://www.dhs.vic.gov.au/nphp/workprog/chip/cyhactionplanbg.htm] *National Public Health Strategic Framework for Children 2005-2008*[7], and Australia's *National Plan of Action for Children and Young People* (Australia's response to the United Nations Special Session on Children[8][1]). The Council of Australian Governments (COAG) Human Capital Agenda completed preliminary work on identifying a small number of key outcomes for early childhood, through the creation of an Early Childhood Subgroup[2].

All these initiatives acknowledge that the influences on child health, development and wellbeing go beyond the remit of any one sector, and that the health, community services and education sectors have joint responsibilities in creating policies that improve outcomes for children.

All Australian Governments are committed to improving the lives of all Australian children. It is therefore essential that Australia has the capacity to monitor investment and progress over the long term. Compared with other developed countries, Australia lacks a set of national, jurisdictionally agreed indicators of child health, development and wellbeing that can be compared across jurisdictions, and used to set policy goals and to monitor progress for all Governments.

Although there are many groups working on various aspects of national reporting, including the AIHW and the ABS, sustained leadership is required to bring the relevant players together. This will enable the systematic coordination of measurement, monitoring and reporting of policy-relevant priority indicators related to Australian children's health, development and wellbeing.

Child health and wellbeing reform agenda projects

In 2005, the Australian Health Ministers' Conference (AHMC) and the Community and Disability Services Ministers' Conference (CDSMC) approved a project to develop a set of national, jurisdictionally agreed Headline Indicators to monitor the health, development and wellbeing of Australian children and to explore processes to facilitate ongoing data collation, analysis and reporting through a program to support Headline Indicators. This was one of four projects within the Child Health and Wellbeing Reform Initiative (led by the Northern Territory [NT]), which aimed to improve child health, development and wellbeing (further information about the projects is detailed in Appendix B).

A strategic project steering group chaired by the Victorian DHS was established to direct and monitor this work and included experts from the WA Department of Health, AIHW, ABS and DoHA. Expertise from the education sector was unable to be sourced for the steering group; however input was sought from the education sector through appropriate subcommittees of the Australian Education System Officials Committee (AESOC).

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[1] A list of relevant national, State and Territory policies are detailed in Appendix C of this report.
[2] Since this time revisions to COAG working groups will mean that child health is within the remit of the Health Working Group.

2. Implementation of the Headline Indicators Project

Throughout 2005-2006, work was undertaken to gauge contemporary thinking around the measurement of children's health, development and wellbeing, building on recent work undertaken by AIHW, ABS and the Australian Council for Children and Parenting (ACCAP). A review of Australian and international literature was undertaken (see Appendix C for detailed information).

Preliminary consultation was undertaken with representatives from relevant departments in each State and Territory Government, and with national data groups. This was followed by a secondary consultation, feedback being sought on the draft report, including priority policy areas and proposed indicators.

A detailed overview of the process undertaken to produce the Headline Indicators and associated program is provided in Appendix B.

The final draft of this report was endorsed by the Community and Disability Services Ministers' Conference (CDSMC) and Australian Health Ministers' Conference (AHMC) and sent for endorsement to NHIG, NCSIMG and AESOC. It was also sent to the COAG Early Childhood Subgroup for information.

3. Understanding Headline Indicators

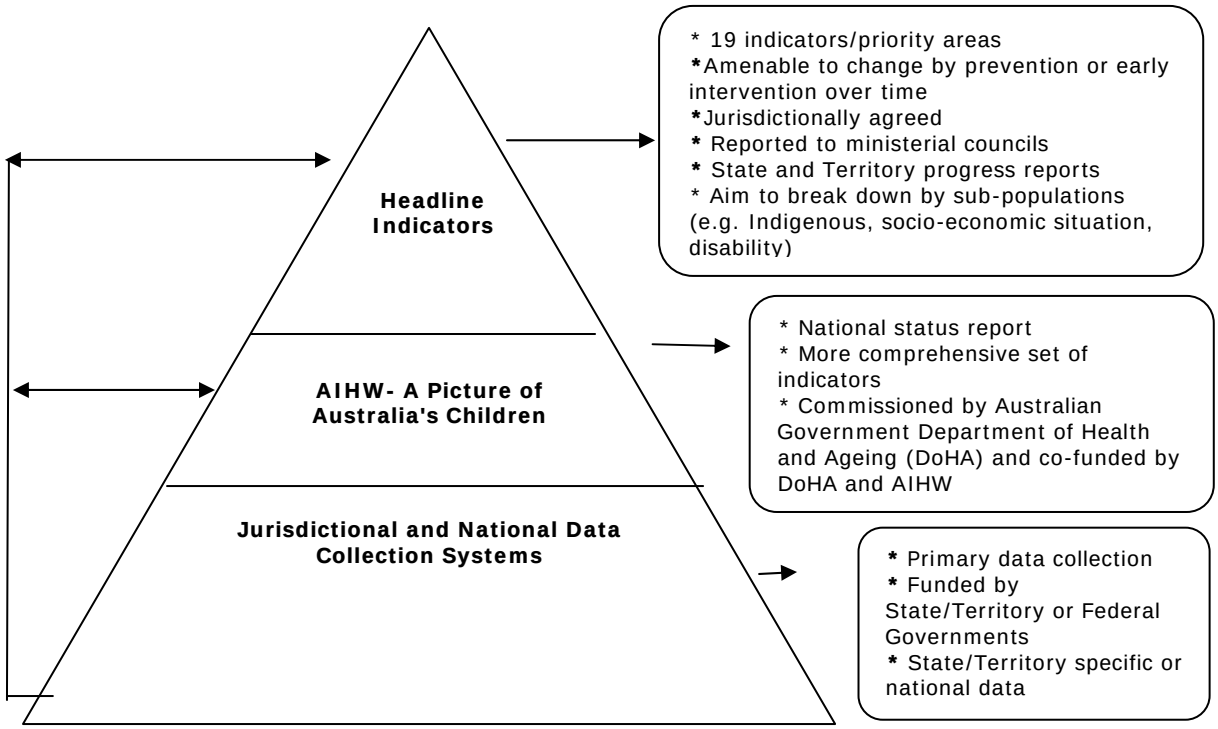
The Headline Indicators form a core set of high-level summary statistics for reporting on the progress made in the health, development and wellbeing of Australia's children. They are designed to focus the policy attention of all Australian Governments on a subset of priority issues for children, and to assist in guiding and evaluating policy development. They are not designed to provide detailed knowledge about the cause of specific improvements. For example, the proportion of children who are overweight and obese has been chosen as a Headline Indicator, but the dietary intake of vegetables/fruit per day and hours engaged in physical activity, while important, are not included.

The Headline Indicators build on the work of many groups reporting on aspects of children's health, development and wellbeing. Most notably, as indicators they emerge from the AIHW's *A Picture of Australia's Children,* which reports national data on a more comprehensive set of indicators across children's health, development and wellbeing.

The establishment of the Headline Indicators *extends* this work to report jurisdictional (rather than national) and sub-population data on a limited subset of indicators where progress can be made through prevention or early intervention. Through an associated program to actively lead data development, coordination and reporting (further details in section 5), it will also be possible to relate data to policy effort across Australia.

Figure 1 outlines the potential bidirectional relationship between Headline Indicators, *A Picture of Australia's Children,* and data already being collected across Australia through jurisdictional and federal processes. Any further work on Headline Indicators will build on the processes already established through *A Picture of Australia's Children.*

Figure 1. Inter-relationships between the Headline Indicators, current national reporting on children's indicators and jurisdictional data collections



4. Priority Areas and Headline Indicators

Selecting policy-relevant priority areas for Headline Indicators

An important aspect of this project was to determine a set of jurisdictionally agreed priority areas relevant to children's health, development and wellbeing. It was expected that Headline Indicators, where they existed, would then fall under each priority area. Therefore priority areas without current indicators could still be included in the process. The availability of data for indicators was not taken as a primary selection criterion, in order to capitalise on opportunities for innovation in data development.

Priority areas were initially selected in relation to their relevance to government policy and their potential to be amenable to change through prevention and early intervention.

The set of policy priority areas is based on a number of principles including that they should:

- broadly cover the domains of child health, development and learning, safety and wellbeing;
- recognise issues at the individual, family and community level, and hence be based on an ecological approach[9];
- include both risk and protective factors for health, development and wellbeing;
- be based on a preventive approach to health, development and wellbeing;
- include a mix of outcomes, determinants and system performance indicators;
- be able to reflect any differences for subgroups of children;
- be relevant to all Australian children; and
- be relevant to State/Territory and Australian Governments' policy and agendas.

After consultation, subgroups of children to include were children with a disability, children from culturally and linguistically diverse (CALD) backgrounds, children living in disadvantage, and Aboriginal and Torres Strait Islander children. It was suggested that *all* the priority areas would impact differentially on these children.

A decision was made to restrict the age range for the Headline Indicators to 0–12 years of age. Therefore, throughout this report, the term 'child' refers to a child in the range of 0-12 years unless otherwise stated. Further information about the age range determination can be found in Appendix B.

A number of priority areas were identified in the consultations, but then failed to meet the criteria for a Headline Indicator, such as not being readily amenable to change through policy intervention (e.g. the number of children with a disability included as a sub-population group) or lack of evidence, or some ambiguity about the benefits/disadvantages for children (e.g. attendance at child care).

However, all these will continue to be reported in the AIHW publication, *A Picture of Australia's Children*[2]. Therefore, the range of priority areas and corresponding Headline Indicators at any one time will be a subset of all possible indicators, influenced by the interests of Government policy, the evidence for effectiveness of intervention, and the feasibility of data collection. For a further discussion, please see Appendix C.

Selecting Headline Indicators for the priority areas

Potential indicators were identified for each priority area based on previous literature and preliminary consultations (please see pages 61-63 for further discussion of the use of selection criteria in developing indicator sets). Each indicator was then assessed against the following criteria:

1. indicator is sensitive to evidence-based intervention strategies;
2. indicator is unambiguous in meaning and interpretation and is based on sound empirical evidence;
3. data collection is methodologically rigorous;
4. data are potentially capable of reflecting differences and diversity in sub-groups including:
    - Aboriginal and Torres Strait Islander children
    - children with a disability
    - children from CALD backgrounds
    - children from socio-economically disadvantaged backgrounds
    - geographically defined groups (i.e. rural and remote areas).

Only one Headline Indicator has been selected to reflect each policy priority area. The Headline Indicators proposed are considered a 'best fit' to these criteria and do not reflect 'ideal' indicators that strictly meet all criteria, particularly in the area of data availability.

There are a number of important issues to consider in the selection of Headline Indicators:

- Most indicators will require some data development work to meet all these criteria. The Headline Indicators therefore provide a prioritisation of where effort should be spent in data development around issues of children's health, development and wellbeing;
- In line with the principles outlined on page 13, where possible, indicators were chosen to capitalise on existing data collection sources. However, it is generally agreed that data and knowledge gaps exist. In particular, the limitations of current data sources and/or the lack of indicators and data sources for priority areas identified throughout this report are consistent with those identified by the ABS in their *Draft National Children and Youth Information Development Plan* [4] and those identified in the AIHW publication, *A Picture of Australia's Children* [2]; and
- While every effort has been made to ensure that the exact wording of the Headline Indicator is correct, slight wording changes may be required when actually reporting data – particularly for those priority areas where the identification of a Headline Indicator and/or data source relies on future work.

The proposed priority areas and their corresponding Headline Indicators (where identified) are presented in Table 1.

Measuring and reporting differences for sub-populations

The need to ensure that data can be appropriately disaggregated to reflect those most at risk of poor outcomes has been highlighted in Government publications such as the Productivity Commission's *Report on Government Services*[10] and the *National Public Health Information Plan*[11]. For example, data reported for any indicator at a jurisdictional level may mask the impact of disadvantage for

particular sub-populations of children, as well as masking progress that these populations are making.

No specific Headline Indicator has been proposed for each of the subgroups noted above (children of CALD background, Indigenous children, children with a disability, etc), as inequalities for these groups span all the policy priority areas. Rather, the differential experience for these subgroups of children has been addressed in the first instance by ensuring that any ongoing program to support Headline Indicators will work proactively towards improved data recording and standard definitions in relation to these subgroups of children. This will begin to tackle the data issues previously identified by the AIHW[2] and ABS[4] in previous publications.

For example, no single 'Indigenous' or 'disability' Headline Indicator has been proposed, as it is important that data for each Headline Indicator across all priority areas can examine and compare the experiences for Indigenous children and disabled children respectively. Reporting of Indigenous identification varies between states and territories and different data collections. It has been recognised by the AIHW[2] and ABS[4] that improvements are needed in identifying Indigenous children in data sets. It is noted that there are policy-relevant priority areas that are specific to Indigenous children (such as rates of otitis media, the main cause of hearing problems faced by Indigenous children) that have not been included as Headline Indicators here, but are reported in the *Overcoming Indigenous Disadvantage* reports[12].

Organising Headline Indicators

For the purpose of organising the material, the framework proposed in the *draft National Agenda for Early Childhood*[6] was used as a framework. It helps to 'map' the priority areas of children's health, development and wellbeing and define the scope of the indicators, as it covers a broad range of health, development and wellbeing fields that affect children in Australia. It is divided into four domains. Given that the focus of the project was on a limited number of Headline Indicators, it was not the intention that a framework would act as a strict guide to indicator selection, nor was it the intention to populate each cell in a given framework. However, it is important that the indicator set covers a diverse range of policy areas, and the *draft National Agenda for Early Childhood* framework was used as a guide for this purpose.

Table 1: Priority areas and Headline Indicators by availability of data

National Agenda Framework Domains	Priority area	Headline Indicator	Data available[3]	Data available but work on data quality needed[4]	Requires development work and data not available[5]
Healthy Families and Young Children	Smoking in Pregnancy	Proportion of women who smoked during the first 20 weeks of pregnancy*			✓
	Infant Mortality	Mortality rate for infants less than one year of age	✓		
	Birth Weight	Proportion of live-born infants of low birth weight	✓		
	Breastfeeding	Proportion of infants exclusively breast fed at 4 months of age			✓
	Immunisation	Proportion of children on the Australian Childhood Immunisation Register who are fully immunised at 2 years of age	✓		
	Overweight and Obesity	Proportion of children whose body mass index (BMI) score is above the international cut-off points for 'overweight' and 'obese' for their age and sex*		✓	
	Dental Health	Mean number of decayed, missing or filled teeth (dmft/DMFT) among primary school children*	✓		
	Social and Emotional Wellbeing	INDICATOR TO BE IDENTIFIED AND DEVELOPED			✓
	Injuries	Age specific death rates from all injuries for children aged 0-4, 5-9 and 10-14 years	✓		
Early Learning and Care	Attending Early Childhood Education Programs	Proportion of children attending an educational program in the two years before beginning primary school		✓	
	Transition to Primary School	Proportion of children entering school with basic skills for life and learning*			✓
	Attendance at Primary School	Attendance rate of children at primary school			✓
	Literacy	Proportion of primary school children who achieve the literacy benchmark*	✓		
	Numeracy	Proportion of primary school children who achieve the numeracy benchmark*	✓		
Supporting Families	Teenage Births	Age-specific fertility rate for 15-19-year-old women	✓		
	Family Economic Situation	Average real equivalised disposable household income for households with children in the 2nd and 3rd income deciles*	✓		
	Shelter	INDICATOR TO BE IDENTIFIED AND DEVELOPED			✓
	Child Abuse and Neglect	Rate of children aged 0-12 who were the subject of child protection substantiation in a given year		✓	
Creating Child Friendly Communities	Family Social Network	INDICATOR TO BE IDENTIFIED AND DEVELOPED			✓

* **Further refinement to indicator, denominator and numerator may be needed before reporting**

[3] Priority areas with Headline Indicators where high quality data are currently available to report nationally and for each jurisdiction.
[4] Priority areas with Headline Indicators where data are currently available, however work needs to be undertaken to enhance the quality of that data
[5] Priority areas where data are not available (either because no Headline Indicator has been identified, or because no collection exists for the Headline Indicator).

5. Future Directions for a Program to Support Headline Indicators

A key objective of this project was to explore a mechanism for ongoing reporting on Headline Indicators. This would include further data development, review and refinement of the indicator suite, nationally coordinated reporting processes, and an assessment of resource implications.

It is hoped that the Headline Indicators will form a set of cross-jurisdictional and cross-sectoral measures of primary importance for informing policy and practice on children's health, development and wellbeing in Australia.

Two national consultation rounds have been undertaken to identify the range of issues necessary to consider in establishing a successful ongoing program to support Headline Indicators.

There was a high degree of support for a program that would have the capacity to:

- promote commitment to improving key child outcomes across Governments;
- direct policy attention to issues;
- monitor key child health, development and wellbeing issues over time;
- facilitate jurisdictional and organisational coordination and collaboration around data collection;
- enhance the quality, consistency and availability of data relating to children's health, development and wellbeing;
- reduce duplication of effort across sectors; and
- lead and facilitate data development for emerging issues.

Functions of a program to support Headline Indicators

Given that not all the priority areas proposed have identified Headline Indicators and/or data sources, a program to support Headline Indicators would have a number of functions, in addition to the production of a report.

1. Providing leadership and coordination with existing data initiatives

The consultation identified the importance of the program to support Headline Indicators making explicit links with the following organisations and committees currently progressing work in relation to one or more of the Headline Indicators:

- The National Children and Youth Statistics Unit, ABS;
- The Children, Youth and Families Unit, Welfare Division, AIHW;
- NCSIMG and relevant subgroups (such as National Disability Administrators [NDA] and Children Services Data Working Group [CSDWG]);
- NHIG and subgroups (such as the National Public Health Information Working Group [NPHIWG], the Statistical Information Management Committee [SIMC] and Health Data Standards Committee [HDSC]);
- Computer Assisted Telephone Interviewing Technical Reference Group (CATI TRG) Units of the NPHIWG.
- MCEETYA Performance Monitoring and Reporting Taskforce (PMRT);
- MCEETYA Early Learning Working Group; and
- COAG Human Capital Stream (to ensure congruency between Headline Indicators and emerging COAG performance measures).

The consultations demonstrated broad agreement that a program to support Headline Indicators can build on existing activities and should have the explicit goal of acting as a coordinated, collaborative nationwide information system to reduce duplication of effort, improve consistency in, and enhance the use of existing data sets. The program itself is not intended to undertake primary data collections.

2. Facilitating data development activities

A program to support Headline Indicators would need to focus on a number of data-development activities. This would include refining a number of Headline Indicators, facilitating and usefully informing the development of data collections, and enhancing data quality and jurisdictional comparability of existing data. Ideally these Indicators would also facilitate jurisdictional activity and lead to relevant data being available for analysis at a small area level.

Of particular importance would be a focus on improving the recording and reporting of data in relation to sub-populations of children, including disabled children, children from CALD or low socio-economic backgrounds, and particularly Indigenous children. Work is currently being undertaken by AIHW and ABS to improve identification of Indigenous status in current data collections.

3. Data management

Several jurisdictions noted the importance of a mechanism to ensure that data from existing data collections are handled in an efficient, secure and effective manner. Although existing organisations such as the AIHW or the ABS are well positioned for these activities, consideration would still need to be given to the requirements of privacy legislation, the intellectual property of the data owners, standardisation, and processes for aggregated data transmission, integration and pooling of data[6]; security of transfer and storage, access to data by States and Territories, and best practice for analysis and reporting.

Data should be managed within the framework of the existing national information agreements on Health, Housing and Community Services, of which all jurisdictions, the AIHW and the ABS are partners.

4. Reporting of data for Headline Indicators

Consultations suggested that a systematic and regular report on Headline Indicators for children's health, development and wellbeing would be valuable for policy, planning and evaluation by all Governments. It is suggested that a report should include:

- data presented nationally and for each jurisdiction and sub-population (initially where available); and
- trend data for each Headline Indicator where possible.

Jurisdictions could then report on progress for each Headline Indicator. A Headline Indicators report would complement the suite of reports currently produced by the AIHW,

[6]The issue of data linkage (linking data across collections at an individual level) was raised during consultations. It is not envisaged at this stage that a program to support Headline Indicators would progress work on linking of data across the headline indicators.

including *A Picture of Australia's Children*[2] and *Australia's Young People: Their Health and Wellbeing*[13].

Consultation feedback suggested that a biennial report on Headline Indicators would be more suitable than an annual report, given the variable reporting patterns and the availability of new data across existing data sets.

Governance and accountability of the program to support Headline Indicators

There was a clear consensus from the consultations that the program to support Headline Indicators should ideally be positioned within an existing organisation with the capacity to ensure coordination of activities, to oversee the integration of information, to facilitate the sharing of ideas and to drive the agenda of the program. Consultations demonstrated strong support for an ongoing program to support Headline Indicators to be within, and led by, the AIHW.

Furthermore, it was clear that the support for and success of the program would depend on jurisdictions and the ABS having active involvement.

6. Conclusion

This project aimed to develop a set of Headline Indicators to measure and monitor the health, development and wellbeing of Australia's children and to explore processes to facilitate ongoing data collation, analysis and reporting.

A set of 19 priority areas were identified through a review of the national and international work in this area, and two national consultations across the health, community services and education sectors in each jurisdiction and with national data groups from each sector.

For many of these priority areas, specific indicators have been proposed; however, for a small number, a robust indicator could not be determined. In addition, for a number of indicators the quality of existing information, issues around definition, and possible data sources require further developmental work.

The project has also identified a number of factors necessary for an ongoing program to support Headline Indicators.

Appendix A: Operational Definitions for Headline Indicators

Healthy Families and Young Children

Smoking in Pregnancy

Rationale:

Prevention strategies and early intervention can assist in reducing the incidence of substance use (in particular alcohol and nicotine) during pregnancy. In 2005, no nationally consistent data existed on the prevalence of substance use (either alcohol or nicotine) during pregnancy.

Smoking in pregnancy has many detrimental effects for both the mother and infant. There is strong evidence that it is associated with low birth weight, intrauterine growth restriction, prematurity, birth defects of extremities, perinatal mortality and sudden infant death syndrome[14], [15], [2]. Rates of smoking during pregnancy are particularly high among Indigenous women[16]. Smoking during pregnancy is the most important known modifiable risk factor for low birth weight and infant mortality.

Data Sources:

The ABS *National Children and Youth Information Development Plan* *[*http://www.nss.gov.au/nss/home.NSF/pages/Children+and+Youth+Statistics?OpenDocument*]* identifies the need for data to be developed on a range of maternal health risk factors, including substance use[4].

There are limited data on smoking during pregnancy from States and Territories but no national prevalence data are currently collected. Data from New South Wales (NSW), WA, South Australia (SA), NT and the Australian Capital Territory (ACT) are reported in the AIHW *Mothers and Babies*[17] publications [http://www.aihw.gov.au/publications/index.cfm/title/10471]. Furthermore, an evaluation of the Perinatal National Minimum Data Set (NMDS) conducted by the AIHW National Perinatal Statistics Unit (NPSU) recommended that smoking status during pregnancy be included in the Perinatal NMDS[18].

The Women's Hospitals Australasia (WHA) are nearing completion of a project to define a set of core maternity indicators to be collected consistently across all Australian hospitals. At the time of finalising the Headline Indicators project, the indicator regarding smoking during pregnancy defined in the core maternity indicators set has been selected as a Headline Indicator. The WHA indicator is expected to be piloted during 2008 and the feasibility of collection through changes to the National Perinatal Statistics Forms will be assessed. It is expected that the Headline Indicator for smoking during pregnancy will continue to be identical to that defined by WHA, and as such, may require changes in line with any alterations made by WHA. Although the feasibility of collection is still under consideration, it is assumed that the information will be obtained at the first antenatal visit – i.e., the collection can occur as a real-time entry during the first 20 weeks, or as a retrospective entry, should the visit take place in the second 20 weeks of pregnancy.

Headline Indicator: Proportion of women who smoked during the first 20 weeks of pregnancy.

Numerator: The number of women who smoked during the first 20 weeks of pregnancy[7]
Denominator: Total number of women giving birth in the reference year
Source: AIHW NPSU (not implemented at present)
Frequency of data availability: annual administrative (not implemented at present)
Scope of collection: AIHW NPSU
Disaggregation: State/Territory, Indigenous status of mother
Priority area reported elsewhere: indicators for Canadian children[19] and for children in the United Kingdom[20].

[7] The use of tobacco is not restricted to the number of cigarettes smoked – inclusion is based on 1–100. Tobacco includes cigarettes, cigars, pipes or any other device used to inhale nicotine. It does not include chewing tobacco.

Healthy Families and Young Children

Infant Mortality

Rationale:

Infant mortality rate is used internationally as the key indicator of the hygiene and health conditions prevailing in a country, and the effectiveness of the health system in maternal and perinatal health[2].

Australia experiences very low and relatively stable infant mortality rates compared with other countries. However, these overall rates mask significantly higher rates of infant mortality for Indigenous Australians. Although rates have slightly improved in recent years in those jurisdictions in which it can be accurately measured, the rates are still two to three times higher than those for non-Indigenous Australian infants[12]. "While there has been a dramatic decline in infant mortality rates in the past century for all Australians, the mortality rate for Indigenous infants is still significantly higher than for infants in the rest of the population"[12].

Headline Indicator: Mortality rate for infants less than one year of age

Numerator: number of deaths of live-born infants less than one year of age registered in the reference year
Denominator: number of live births registered in the reference year
Source: ABS Births and ABS deaths
Frequency of data availability: Annual administrative data
Scope of collection: national
Disaggregation possible: Indigenous status for Queensland (QLD), NT, SA and WA, Socio-Economic Indexes for Area (SEIFA), Australian Standard Geographical Classification (ASGC) remoteness
Priority area reported elsewhere: *Overcoming Indigenous Disadvantage [*http://www.pc.gov.au/gsp/indigenous*] reports*[12], *A Picture of Australia's Children*[2], indicators for Italy[21], Productivity Commissions, [http://www.pc.gov.au/gsp/reports/rogs] *Report on Government Services*[10], indicators for Canadian[19], New Zealand (NZ)[22], American children[23], for children in the United Kingdom (UK)[20], and for European children[24].

Healthy Families and Young Children

Birth Weight

Rationale:

Birth weight is an indicator of general health for infants and is a determinant of infant survival, health, development and wellbeing. Low birth weight is associated with increased risk of death in the first year of life and long-term disability and diseases. There is an association between low birth weight and the development of chronic disease in later life[25]. Factors linked with low birth weight include pre-term births, poor maternal health, life style, substance use in pregnancy, economic circumstances and multiple births. Antenatal care and good nutrition, control of infections, and reduction of substance use during the antenatal period can be used to maximise birth weight.

The World Health Organization (WHO) defines low birth weight under the following categories:

- Low birth weight – infants weighing less than 2,500 grams at birth;
- Very low birth weight – infants weighing less than 1,500 grams at birth; and
- Extremely low birth weight – infants weighing less than 1000 grams at birth.

Birth weight is the product of the duration of gestation and the rate of fetal growth, which are independent indicators of antenatal health. Inappropriate durations of pregnancy and rates of fetal growth can have different outcomes. In terms of selecting one 'Headline Indicator' for the priority area of birth weight, low birth weight will capture both very preterm (well grown) and very poorly grown (term) infants as well as those with intermediate values for both gestational duration and growth.

Information about birth weight is routinely reported in the AIHW's *Mothers and Babies* reports[17]. The inclusion of low birth weight as a Headline Indicator is congruent with the COAG Performance Measure (Human Capital Stream) to "reduce the prevalence of key risk factors that contribute to chronic disease".

Headline Indicator: Proportion of live-born infants of low birth weight.

Numerator: Number of live-born infants with low birth weight (<2,500g) in reference year
Denominator: Total number of live births in reference year
Source: AIHW NPSU
Frequency of data availability: annual administrative data
Scope of collection: national
Disaggregation: State and Territory, Indigenous status of mother[8], maternal country of birth, SEIFA for some jurisdictions, ASCG remoteness classification.
Priority area reported elsewhere: *A Picture of Australia's Children*[2], Productivity Commission's *Report on Government Services*[10], Overcoming *Indigenous Disadvantage* reports[12], indicators for Italian[21], Canadian[19]m NZ[22], American children[23], and for children in the UK[20].

[8] Indigenous identification in the AIHW NPSU is recorded for the mother only and does not include recording of infants born to non-Indigenous mothers with Indigenous fathers.

Healthy Families and Young Children

Breastfeeding

Rationale:

There are many benefits to both mother and infant from breastfeeding. Infants are born with an immune system that is underdeveloped. Breast milk protects the infant from disease and assists the immune system to develop. Breastfeeding provides protection for the infant against a number of infections including gastrointestinal illness, lower respiratory infection, otitis media, eczema and necrotising enterocolitis.[26]. There is good evidence that breastfeeding reduces the risk of overweight and obesity in childhood[27], [28], and reduces the risk of chronic disease such as diabetes[29]. Psychological benefits of breastfeeding between a mother and infant have also been recognised[30, 31]. Breastfeeding provides optimal nutrition for infants and promotes infant bonding and attachment.

In Australia the National Health and Medical Research Council (NHMRC), in accordance with WHO guidelines, recommends exclusive breastfeeding from birth **up to** six months of age[32], [2]. Breastfeeding should be continued for up to two years and beyond.

A set of indicators to monitor breastfeeding in Australia was proposed by the Australian Food and Nutrition Monitoring Unit of the then Australian Government Department of Health and Aged Care in 2001[33]. One of the indicators recommended was the measurement of the percentage of infants **exclusively** breastfed in the previous 24 hours at each completed month of age to six months.

The inclusion of breastfeeding as a Headline Indicator is congruent with the COAG Performance Measure (Human Capital Stream) to “reduce the prevalence of key risk factors that contribute to chronic disease”.

Data Sources:

The AIHW has identified the lack of a current national data source providing information on the proportion or duration of infants exclusively breastfed[2]. The ABS has also identified the need for data to be updated and expanded on the prevalence and duration of breastfeeding[4].

Estimates on other aspects of breastfeeding such as duration and main reason for discontinuing breastfeeding, as well as predictors of breastfeeding such as education of the mother, are available from the 1995 and 2001 National Health Surveys.

It is recognised that difficulties in measurement arise in relation to the wording of the WHO recommendation of **exclusive** breastfeeding **up to** six months of age, as often solids are introduced to the infant around this time. As such, issues around the age of infants included in any state or national sample need to be considered carefully in order to collect statistically robust and policy relevant data on exclusive breastfeeding of Australian infants. For this reason, the age of 4 months has been specified for measurement of the Headline Indicator until such a time as reliable data can be collected on exclusive breastfeeding ‘up to’ six months of age. This is an approach taken by the NSW Child Health Survey[34] in measuring at 4 and 6 months.

Headline Indicator: Proportion of infants exclusively breastfed at 4 months of age.

Numerator: Number of infants exclusively breastfed at 4 months of age.
Denominator: Number of infants at 4 months of age.
Source: Not available in all states
Frequency of data availability: Not available
Scope of collection: Not available
Disaggregation: Not available
Priority area reported elsewhere: *A Picture of Australia's Children*[2], indicators for Italian[21] and Canadian children[19], for children in the UK[20], and for European children[24].

Healthy Families and Young Children

Immunisation

Rationale:

Immunisation against vaccine-preventable diseases such as diphtheria, tetanus, pertussis (whooping cough), polio, Haemophilus Influenza type B (Hib) Hepatitis B, Varicella (chicken pox), Meningococcal C and Pneumococcal disease, Rubella, Measles and Mumps is an effective public health intervention. It has significantly reduced the morbidity and mortality arising from these diseases commonly occurring in childhood[3]. Australian children are protected against these communicable diseases through routine childhood immunisation.

The inclusion of immunisation as a Headline Indicator was congruent with the COAG Performance Measure (Human Capital Stream) to "increase effectiveness and efficiency of the health system in achieving health outcomes". The indicator not only provides information on the proportion of children who are immunised, but reflects the capacity of the health system to effectively target and provide vaccinations to all Australian children.

Data Source

Information about immunisation is obtained through the Australian Childhood Immunisation Register (ACIR), a database recording details of vaccinations provided to children under the age of seven who are enrolled in Medicare or who have received a vaccination. There are varying estimates of the level of coverage among Indigenous children. Issues around the identification of Indigenous children on the ACIR mean that estimates of immunisation coverage by Indigenous status may not be representative of the general population of Indigenous children[2].

Advice from the National Centre for Immunisation Research and Surveillance (NCIRS) recommends 2 years of age as the point for measurement for this Headline Indicator. This is also the age for reporting on immunisation coverage to the WHO.

Headline Indicator: Proportion of children on the Australian Childhood Immunisation Register who are fully immunised at 2 years of age.

Numerator: Number of children on the ACIR who are fully immunised[9] at 2 years of age.
Denominator: Number of children aged 2 years.
Source: ACIR
Frequency of data availability: quarterly from 1996
Scope of collection: national administrative data
Disaggregation: State and Territory, Indigenous status (although improvement needed[4]), SEIFA
Priority area reported elsewhere: *A Picture of Australia's Children*[2], indicators for Italy[21], Productivity Commission [http://www.pc.gov.au/gsp/reports/rogs] *Report on Government Services*[10], indicators for Canadian[19], and NZ children[22], for children in the UK[20] and for European children[24].

[9] There is the possibility that a small percentage of children who are recorded as fully immunised on the ACIR have not received all recommended childhood vaccinations, as vaccinations for meningococcal C, pneumococcal and varicella are not currently linked to the National Immunisation Program Schedule.

Healthy Families and Young Children

Overweight and Obesity

Rationale:

Childhood overweight and obesity is associated with increased risk factors for chronic diseases such as heart disease, stroke and diabetes. The most significant long-term consequence of obesity in childhood is its persistence into adulthood and the associated increased risks of disease[35], [36]. Obesity carries more stigma in children than a physical disability, and can affect social acceptance and self-esteem[37]. Poor nutrition, sedentary lifestyles and obesity are estimated to account for more than 10% of the burden of disease, and they equal tobacco in being the most important avoidable cause of ill-health in Australia today[35].

While a single indicator covering all that is important to address the 'obesity' priority area is not available, useful indicators of progress can be obtained by looking at weight measurements, physical activity levels and nutrition – which all contribute to healthy weight in children. For the purpose of having one Headline Indicator for this priority area, body mass index (BMI) has been chosen. Overweight and obesity are normally measured by BMI, which is the ratio of weight in kilograms to the square of height in metres (kg/m2). BMI is used to categorise people into one of four groups:

- underweight;
- healthy weight;
- overweight; and
- obese.

For children 2-18, BMI is calculated in relation to growth charts for the child's age and sex. International reference charts have recently been completed[38].

It is recognised that for some sub-populations of children, issues of underweight and/or the distribution of weight across the four BMI groups could also be of significance. However, for the purposes of Headline Indicators, only overweight and obesity has been included because of the concern of prevalence across the Australian child population.

Be Active Australia: A Framework for Health Sector Action for Physical Activity 2005-2010 [http://www.dhs.vic.gov.au/nphp/publications/documents/nphp_baa_aug_05_no_cover.pdf][39] and a *National Plan for Healthy Weight 2008* [http://www.health.gov.au/internet/healthyactive/publishing.nsf/Content/healthy_weight08.pdf/$File/healthy_weight08.pdf][35], have included children and families as a key target group. These plans recognise the need to monitor levels of overweight and obesity and for a consistent system for such monitoring[2]. The inclusion of "weight (BMI)" as a Headline Indicator is congruent with the outcome of "improved regular tracking of height and weight status in the community as well as monitoring of knowledge, attitudes, intentions, behaviours and other indicators relating to healthy eating and active living" outlined in *National Plan for Healthy Weight 2008*[35].

The NHMRC[28] has indicated that population approaches to monitoring obesity might be more successful than screening individual children. Regular, systematic population-based surveys of height, weight and BMI are recommended to monitor secular trends in overweight and obesity for the whole population, and for subgroups at particular risk [40]. The existing data sources below are surveys aimed at sampling of children rather than a

systematic recording of BMI of every Australian child through administrative methods (e.g. in schools).

The inclusion of overweight and obesity as a Headline Indicator was also congruent with the COAG Performance Measure (Human Capital Stream) to "reduce the prevalence of key risk factors that contribute to chronic disease".

Data Sources:

There is no current, national source of information about children's weight, overweight and obesity. The ABS has identified the need for improvements, updates and expansion of data relating to nutrition and BMI in children, particularly for Indigenous children[4]. This was also an area identified as requiring data enhancement by the AIHW[2].

The most recent data comes from the 1995 National Nutrition Survey, which provided data at a national level on the nutritional habits and behaviour of children (aged 2 to 18), including data on children's measured height and weight. More recent data are available through studies in a number of states with relatively smaller samples[41].

The proposed 2006 DoHA National Children's Nutrition and Physical Activity Survey is one potential source of information about children's and young people's health and weight. The purpose of the survey is to collect detailed information about food and nutrient intakes, physical activity levels, and physical measurements such as height and weight among children and young people. It is intended that the survey will provide comparable data with earlier nutrition surveys involving children that were conducted in 1985 and 1995. The survey is currently under development. Furthermore, DoHA managed a project on behalf of the National Public Health Partnership (NPHP) to develop a framework and business case for an ongoing national food, nutrition and physical activity monitoring and surveillance system. At this point there is no identified national resource that could be used to implement the outcomes of this process[4].

The ABS is investigating the feasibility of collecting measured height and weight for children in the National Health Survey.

There are some concerns about using BMI for Australian children, including the clinical 'meaning' of cut-off points to classify overweight and obesity in children, issues around the comparability of the reference populations used to develop the growth reference charts with which BMI is compared[28], and over-or-under representation of adiposity in children in various subgroups[40]. As such, any collection of information for this Headline Indicator would need to consider these limitations and ensure further work is done to determine the most appropriate ages for reporting BMI for this indicator.

Headline Indicator: Proportion of children whose BMI score is above the international cut off points for 'overweight' and 'obese' for their age and sex.

Numerator: Number of children whose BMI score is above the international cut off point for 'overweight' and 'obese' for their age and sex in sample
Denominator: Number of children
Source: 1995 or National Children's Nutrition and Physical Activity Survey proposed for 2006 or 2007
Frequency of data availability: 1995 or 2006
Scope of collection: national, survey
Disaggregation: States and Territories, Rural, Remote and Metropolitan Areas (RRMA),
Priority area reported elsewhere: A *Picture of Australia's Children*[2], indicators for NZ[22] and American children[23], for children in the UK[20], and for European children[24].

Healthy Families and Young Children

Dental Health

Rationale:

Children's dental health has been improving in recent years; but there is still an ongoing need to monitor trends and to address sub-population issues. "Good oral health throughout infancy and early childhood contributes to better dental health in adulthood, resulting in less decay and reduced loss of natural teeth. Early preventive strategies, including water fluoridation, improved oral hygiene practices, better diet, regular brushing and flossing, and improved disease management all help to maintain the health of teeth and gums[2]."

Dental decay experience is expressed as a 'decayed, missing or filled teeth ('dmft' for children aged six years) or Decayed, Missing or Filled Teeth ('DMFT' for children aged 12 years): the number of teeth currently decayed, missing, or filled. Data for dmft/DMFT scores for children are derived from the Child Dental Health Survey, which monitors the dental health of children enrolled in school dental services operated by health departments in States and Territories. Children are enrolled from both government and, to a lesser extent, private schools. There are also some variations among State and Territory services in terms of the proportion of all children who use the service[42]. Measures of dmft/DMFT are normally reported for children aged six and for children aged 12 years.

Headline Indicator: Mean number of decayed, missing or filled teeth (dmft/DMFT) among primary school children.

Numerator: Number of decayed, missing or filled teeth among primary school children[10]
Denominator: Number of children aged six/twelve years of age
Source: The Child Dental Health Survey
Frequency of data availability: annual
Scope of collection: national administrative data
Disaggregation: sex, birthplace of child, indigenous status of child, state and territory
Priority Area reported elsewhere: *A Picture of Australia's Children*[2], *Overcoming Indigenous Disadvantage* reports[12], indicators for NZ children[22] and for children in the UK[20].

[10] The age at which data should be reported for this indicator has not been determined. Options include children at age six and those at age 12 years – in line with current report practices for dmft/DMFT. Further clarification from the AIHW Dental Statistics Research Unit will be sought during the reporting stage of the Headline Indicators.

Healthy Families and Young Children

Social and Emotional Wellbeing

Rationale:

Issues of mental health were raised in the consultations as being necessary for inclusion as a Headline Indicator. However, the emphasis was distinctly on mental wellbeing rather than mental ill health. Child mental health can be defined in a variety of ways. The WHO has defined mental health as "a state of emotional and social wellbeing"[43]. It is for this reason that an emphasis on social and emotional wellbeing is made in the Headline Indicators as opposed to a measure of mental ill health or pathology. The inclusion of social and emotional wellbeing was also considered by the COAG Human Capital Stream as a performance measure. Social and emotional wellbeing is also an indicator for European children[24].

Data Sources:

There are very few national or nationwide data sources that describe the social and emotional wellbeing of Australian children. The ABS has identified the need for data to be updated and expanded in relation to children's mental health and social/emotional development, particularly for Indigenous children[4]. It was also raised as a gap in existing knowledge and data by the AIHW[2].

The only detailed study to assess the mental wellbeing of children at a population level is the 1997 National Survey of Mental Health and Wellbeing. The child component of the survey was conducted in 1998 with a sample of 4,500 children. Mental health problems were measured in the survey using the Child Behaviour Checklist. The checklist asked about a number of emotional and behavioural problems. These data on rates of problems (such as Attention Deficit Hyperactivity Disorder and conduct disorders) is presented in the AIHW's *Picture of Australia's Children*[2].

The Australian Early Development Index (AEDI) may provide further information on children's social and emotional development in Australia. The index collects information on the physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, communication skills and general knowledge of children in their first year of primary school. This population-based measure of children's development is currently being piloted in 60 communities across Australia[44].

The Longitudinal Study of Australian Children (LSAC) is currently being undertaken by the Australian Institute of Family Studies (AIFS) with funding from the Australian Government Department of Families, Community Services and Indigenous Affairs (FaCSIA). The study aims to examine the impact of Australia's social, economic and cultural environment on children. More than 10,000 children and their families were recruited to the study and will be followed at two-yearly intervals until 2010. LSAC addresses a range of key research questions about children's development, health and wellbeing, including factors related to children's emotional and social wellbeing. It is possible that the Longitudinal Study of Indigenous Children (LSIC), also funded by FACSIA, can provide information on the social and emotional wellbeing of Indigenous children. The study aims to improve the understanding of, and policy response to, the diverse circumstances faced by Aboriginal and Torres Strait Islander children, their families, and communities.

Further work is necessary to identify relevant existing indicators and data sources of children's social and emotional wellbeing.

Healthy Families and Young Children

Injuries

Rationale:

Injury and poisoning are the leading causes of death, and major causes of morbidity among children in Australia[45]. Injuries can have lasting effects, such as disability or disfigurement, which can impair a child's development and future wellbeing. A number of factors such as socio-economic background, family structure, maternal education, housing, sex and age of the child, affect a child's risk of injury[45] [2].

The incidence of childhood mortality or morbidity as a result of injury can be effectively reduced through the implementation of prevention strategies. Injury is also an identified National Health Priority area. Specific government policy to prevent injuries tends to focus on the specific cause of injury (such as drowning, falls or poisoning). A comprehensive review of deaths from each type of injury cause is reported annually by the AIHW National Injury Surveillance Unit (NISU), the latest available report for data on deaths being in 2002[46]. However, for the purposes of a 'headline indicator' for children's injuries, age-specific death rates for all (aggregate) injury causes has been selected, and data are available from the ABS Causes of Deaths collection.

Data on injury related deaths comes from the ABS Causes of Deaths collection. Injury-related deaths are those where the underlying cause is determined to belong to the International Classification of Diseases (ICD-10) Category 'External Causes of Morbidity and Mortality (VO1-Y98).

Headline Indicator: Age-specific death rates from all injuries for children aged 0-4, 5-9 and 10-14 years.

Numerator: Number of deaths of children in the age range of 0-4, 5-9 and 10-14 in a year, from injury
Denominator: The estimated resident population aged 0-4, 5-9 and 10-14[11] at 30 June
Source: ABS Cause of Death collection
Frequency of data availability: annual from 1964
Scope of collection: national administrative data
Disaggregation: state and territories, Indigenous status of child, sex, age, remoteness index
Priority area reported elsewhere: A *Picture of Australia's Children*[2], Productivity Commission's *Report on Government Services*[10], indicators for Canadian[19], NZ[22] and American children[23], and for European children[24].

[11] These are the standard age classifications used to report age-specific death or injury rates. While 10-14 years is beyond the identified age range for the Headline Indicators, the pragmatics of using an existing data source need to be considered.

Early Learning and Care

Attending Early Childhood Education Programs

Rationale:

Many children have access to formal early learning programs through attendance at childcare or preschool. Preschool is a planned education and developmental program for children in the year (or sometimes two years) before they begin full-time primary education. A degree-qualified early childhood teacher plans the program. Preschool programs are sometimes delivered within childcare centres. Preschool has various names in different States and Territories including kindergarten, child parent centres, pre-primary, etc. The age at which a child attends primary school differs across jurisdictions, and consequently the age at which a child attends an early childhood education program before beginning primary school can also differ.

Attendance at a quality preschool program is considered to have a number of benefits, including better intellectual development and independence, sociability and concentration, cognitive development in the short term, and preparation for children to succeed in school[47] [2]. Preschool programs may be especially positive in the lives of children from disadvantaged backgrounds where children may not be receiving ample stimulation from the home environment[2].

Participation in quality early child education programs contributes to optimal child development, cognitive development and early success in school. Preschool experience can help reduce the gap in achievement between disadvantaged and advantaged children in the early years of school[47] [48]. Attendance at educational services before primary school has a significant positive impact on preparation for school and on school attendance in first grade[49].

Data Sources:

The nature of children's services throughout Australia is varied and it is difficult to estimate the number of children who participate in formal learning programs in the years before the first year at primary school. No comprehensive national comparable collection of information on early learning programs exists in Australia. While there is some duplication of effort across data collections, there are noticeable gaps in information and no one single data collection can accurately measure the number and proportion of children who attend early learning programs in Australia[50].

At present, the ABS Child Care Survey (a supplement to the ABS Labour Force Survey) is the most reliable source of information about the use of preschool services across Australia. Its limitations are that it is collected only every three years, has a high relative standard error for the smaller States, cannot provide information about rural and remote areas, and the 2005 survey does not identify preschool programs run within long day care centres[51]. The ABS also stated that the number of children attending preschool could be undercounted in the survey because of differences in terminology and starting age of preschool in different States and Territories.

Further information may be obtained from the Child Care Census conducted by FaCSIA. The census collects information from Australian Government approved service providers about their staff, children and parents using the service and various other aspects of service provision. The latest census of these services was carried out in March 2004.

The ABS has identified a need for improvements in relation to early childhood learning, development and outcomes, including preschool attendance (not just enrolment) rates, and children's participation in formal early learning opportunities, particularly for children from CALD backgrounds[4].

A number of activities are under way to address the limitations of existing information about attendance at early learning programs. A range of nationally consistent early childhood education indicators is being developed by the ABS to address the availability of quality statistics on early childhood education. An interdepartmental advisory group, comprising representatives of national and State education departments, has provided guidance. The indicators are being compiled from current measures and available data. Assessment of fitness for purpose of indicators is a key part of the project[4]. The ABS is also planning an Early Years Learning Survey for 2008, to be included on the ABS Household Survey program as an adjunct to the Child Care Survey. Topics might include parental involvement in learning, attendance and non-attendance in formal, non-formal and informal early learning activities. Consultation is currently underway to finalise the content of the Survey.

The Children's Services Data Working Group (CSWDG), under the NCSIMG, has developed a Children's Service National Minimum Data Set (CSNMDS) which will provide nationally comparable data on children who access childcare and preschool services, the services themselves and the childcare workforce. It is a service-based administrative collection of all formal care and preschool activities, and includes routine collection of information on services such as management, opening hours, activities offered and fees charged. The CSNMDS will allow each jurisdiction to regularly report on the same things about children's services – those defined as childcare and preschool services and for which the service received Australian or State/Territory Government funding – but not all children's services. The CSNMDS does not cover full-time primary education services, or services which are funded entirely by local Governments. Data development for the CSNMDS is complete; however, implementation in each jurisdiction has not progressed[10]. This implementation of the CSNMDS would provide nationwide and consistent data on the children attending an educational program in the two years before beginning primary school.

Further work needs to be completed on the definitions of attendance and educational programs in line with implementation of the CSNMDS and data collection for this indicator.

Headline Indicator: Proportion of children attending an educational program in the two years before beginning primary school.

Numerator: Number of children attending an early educational program in the two years before beginning primary school in the reference year.
Denominator: Number of children in the population in the reference year in the age range corresponding to two years before beginning primary school in the reference year.
Source: CSNMDS (not yet implemented)
Frequency of data availability: not available in 2006
Scope of collection: not available
Disaggregation: Indigenous status, sex of child, age of child, main language other than English spoken at home, disability status, State and Territory
Priority area reported elsewhere: Productivity Commission's *Report on Government Services*[10], *Overcoming Indigenous Disadvantage* reports[12], *A Picture of Australia's Children*[2], indicators for NZ[22], and American children[23], for children in the UK[20] and for European children[24].

Early Learning and Care

Transition to Primary School

Rationale:

Issues around the transition to full-time primary school for children are discussed under a number of conceptual paradigms (including readiness for school and readiness for learning). Transition issues relate to the emotional competence, capacity for engagement with others and resilience in meeting demands of schooling for children. "Research has shown that children are most successful as they enter school when they have developed the emotional capability to manage their feelings and behaviour and when they have a base of strong academic and social skills[52]." The year before school has been recognised as extremely important to childhood development and wellbeing. Furthermore, it is a crucial time for working with children who might have difficulty adjusting to the primary school environment[53].

"Efforts to conceptualise school readiness, while widespread, are in their infancy and characterised by controversy"[54]. The controversy appears to lie in the distinction between school readiness (a school entry measure of a standard of development) and learning readiness (recognising the fluid and cumulative nature of development). Further controversy lies in the tension between emphasising a child's readiness for school (the child outcome focus) and the inattention paid to the extent to which the school is ready for the child. However, "… indicators that assess and track the school readiness and schooling of our nation's children are likely to become a particularly salient component of any effort to construct national indicators for children"[54].

Possible indicators of successful transition to school include exposure to reading at home, exposure to pre-numeracy experiences, approaches to learning, emergent literacy and numeracy development, parental attitudes and expectations, and bilingualism[54].

Increasing the proportion of children entering school with basic skills for life and learning was identified as an outcome requiring further discussion at the meeting of COAG on 10 February 2006[55]. The wording from COAG has been included below as a proposed indicator.

Data Sources

Data on concepts relating to the transition to school are limited.

The AEDI might provide further information on children's successful transition to schooling. The index collects information on the physical health and wellbeing, social competence, emotional maturity, language and cognitive skills and communication skills and general knowledge of children. This community-based measure of children's development is currently being piloted in 60 communities across Australia[44].

LSAC aims to examine the impact of Australia's social, economic and cultural environment on children. LSAC investigates, among many other issues, factors related to children's success in transition to schooling and the factors behind this success. It also asks questions about what early experiences support children's emerging literacy and numeracy, and what factors ensure a positive 'fit' between child and school to promote a good start in the first years of primary education. It is possible that LSIC might be able to provide information on issues around transition to school for Indigenous children. The study aims to improve the understanding of, and policy response to, the diverse

circumstances faced by Aboriginal and Torres Strait Islander children, their families, and communities.

Further consultation and research needs to be undertaken to identify the relevant concepts relating to transition to schooling most salient for inclusion as a Headline Indicator. This will need to be done in conjunction with emerging policies. Further consultation might need to be undertaken to develop data collection relevant to a Headline Indicator for transition to schooling.

Headline Indicator: Proportion of children entering school with basic skills for life and learning

Numerator: to be defined
Denominator: to be defined
Source: not currently available
Frequency of data availability: not currently available
Scope of collection: not currently available
Disaggregation: not currently available
Priority area reported elsewhere: COAG Human Capital Agenda

Early Learning and Care

Attendance Rate at Primary School

Rationale:

Primary school provides the first compulsory educational experience for Australian children. The attendance rate (actual attendance at school each day for each child) is distinct from a child's enrolment in primary school (registration at school that might not reflect whether the child actually attends). Issues of absenteeism or truancy are related to the attendance rate.

The inclusion of attendance at primary school as a Headline Indicator was congruent with the COAG Performance Measure (Human Capital Stream) to "increase the proportion of young people meeting basic literacy and numeracy standards, and improve overall levels of achievement".

Data Sources

The ABS has identified the need for data to be developed on children's attendance rates in compulsory schooling, in particular data around Indigenous and CALD children's school attendance rates and absenteeism[4].

The MCEETYA PMRT has reviewed current student attendance rate data and is furthering development of a methodology for the collection and reporting of school attendance data in a nationally consistent way, as required by Australian Government's Schools Assistance (Learning Together - Achievement Through Choice and Opportunity) Act 2004. PMRT is exploring the measurement of attendance through attendance rates or similar. This involves measuring the extent to which students, especially Indigenous students, are actually attending school when they should. Precise definition of the indicator, numerator and denominator will be led by the PMRT in further refining the methodology of data collection.

Headline Indicator: Attendance rate of children at primary school

Numerator: to be defined
Denominator: to be defined
Source: not available
Frequency of data availability: not available
Scope of collection: national
Disaggregation:
Priority area reported elsewhere: *Overcoming Indigenous Disadvantage* reports[12][12] and indicators for NZ children[22].

[12] Although participation (enrolment) data are presented in lieu of 'attendance' data.

Early Learning and Care

Literacy Skills

Rationale:

National benchmarks in literacy and numeracy represent the minimum acceptable standard below which a student will have difficulty making progress in school. Academic performance in early grades is considered a significant predictor of children's retention in high school and secondary college.

MCEETYA has established national benchmarks for reading and writing that represent minimum standards of performance. Results are presented in a National Report on Schooling[56] annually as part of the MCEETYA 1999 National Goals for Schooling in the Twenty-First Century[57]. Testing is routinely undertaken for primary school children in grade three and in grade five.

Recent changes to the design and administration of literacy testing aims to increase comparability of results across States/Territories, consistency of data collection, analysis and reporting, and effectiveness in the recording of sex, Indigenous status, language background, geographic location and socio-economic backgrounds of children[58].

The inclusion of literacy as a Headline Indicator was congruent with the COAG Performance Measure (Human Capital Stream) to "increase the proportion of young people meeting basic literacy and numeracy standards, and improve overall levels of achievement" [55].

Headline Indicator: The proportion of primary school children who achieve the literacy benchmark.

Calculation: The percentage of students meeting the benchmark is estimated and reported, with 95% confidence intervals[13]
Source: MCEETYA National Report on Schooling
Frequency of data availability: annually
Scope of collection: national
Disaggregation: State and Territory, language spoken, Indigenous status of child, socio-economic situation, sex of child
Priority area reported elsewhere: *Overcoming Indigenous Disadvantage* reports[12], *A Picture of Australia's Children*[2], Productivity Commission's *Report on Government Services*[10], indicators for NZ[22] and American children[23].

[13] The year level at which data should be reported for this indicator has not been determined. Options include reporting for children in years three and five in line with current report practices for MCEETYA. Further clarification from the MCEETYA PMRT will be sought during the reporting stage of the Headline Indicators.

Early Learning and Care

Numeracy Skills

Rationale:

National benchmarks in literacy and numeracy represent the minimum acceptable standard without which a student will have difficulty making progress in school. Academic performance in early grades is considered a significant predictor of children's school retention in high school and college.

MCEETYA has established national benchmarks for numeracy, which represent minimum standards of performance. Results are presented in a National Report on Schooling[56] annually as part of the MCEETYA 1999 National Goals for Schooling in the Twenty-First Century[57]. Results are routinely provided for primary school children in grade three and in grade five.

Recent changes to the design and administration of the numeracy testing aim to increase comparability of results across States/Territories, consistency of data collection, analysis and reporting, and effectiveness in the recording of sex, Indigenous status, language background, geographic location and socio-economic backgrounds of children[58].

The inclusion of numeracy as a Headline Indicator was congruent with the COAG Performance Measure (Human Capital Stream) to "increase the proportion of young people meeting basic literacy and numeracy standards, and improve overall levels of achievement"[55].

Headline Indicator: The proportion of primary school children who achieve the numeracy benchmark.

Calculation: The percentage of students meeting the benchmark is estimated and reported, with 95% confidence intervals[14]
Source: MCEETYA National Report on Schooling
Frequency of data availability: annually
Scope of collection: national
Disaggregation: State and Territory, language spoken, Indigenous status of child, socio-economic situation, sex of child
Priority area reported elsewhere: *Overcoming Indigenous Disadvantage* reports[12], *A Picture of Australia's Children*[2], Productivity Commission's *Report on Government Services*[10], indicators for NZ[22] and American children[23].

[14] The year level at which data should be reported for this indicator has not been determined. Options include reporting for children in years three and five in line with current report practices for MCEETYA. Further clarification from the MCEETYA PMRT will be sought during the reporting stage of the Headline Indicators.

Supporting Families

Teenage Births

Rationale:

Young maternal age is associated with adverse perinatal and child outcomes. Young mothers could be more likely to drop out of school, be unemployed or low paid, to live in poor housing conditions, to suffer from depression and require Government assistance[59]. It has been reported that children born to teenage mothers develop more behaviour problems, tend to be more impulsive than older mothers' children, and are more likely to be born into, and continue to live in, social and economic disadvantage[60].

Information about the teenage birth rate is published annually in the ABS publication *Births Australia* and is based on births registered in the calendar year. The most recent publication includes data on births occurring in 2004[61].

Headline Indicator: Age specific fertility rate for 15-19 year old women

Numerator: Number of live births to women aged 15-19 years in the calendar year[15]
Denominator: The female estimated resident population aged 15-19 at 30 June
Source: ABS Births Australia
Frequency of data availability: Annual administrative data
Scope of collection: National with State and Territory birth registration data
Disaggregation: state/territory, Indigenous status of mother, country of birth of mother, SEIFA
Priority area reported elsewhere: indicators for Italian[21], American[23] and for children in the UK[20].

[15] For calculating these rates, births to mothers under 15 years are included in the 15-19 years age group.

Supporting Families

Family Economic Situation

Rationale:

For most families, household income is the most important determinant of their economic situation. Children living in households with low incomes are more likely to have insufficient economic resources to support a minimum standard of living[62]. Children living in families without economic security are at a greater risk of poor outcomes both in the short and longer term. Living in a family with low income can affect a child's nutrition, access to medical care, safety of their environment, level of stress in the family and the quality and stability of their care[2]. Research confirms that for a number of health, development and wellbeing outcomes (including socio-emotional functioning, mental health, physical health, educational attainment and later employment), children in the lowest income groups are at a higher risk of disadvantage[2]. A low standard of living (affected by disposable incomes) is associated with problems and can be a consequence of a lack of participation in work, substance use, poor health, poor education, poor housing, crime, social exclusion and a lack of opportunity for children[62].

Data Sources:

There are many ways in which the economic situation of families can be measured. Household income is commonly used in preference to personal income in recognition of the sharing of income between partners in couple relationships and between parents and children. Larger households normally require a greater level of income to maintain the same material standard of living than smaller households, and the needs of adults are usually greater than those of children. As such, the income estimates are adjusted by the equivalence factors to standardise the income estimates for household size and composition, while taking into account the economies of scale that arise from the sharing of dwellings.

In 2006, the ABS used a 'headline indicator' on financial hardship for households in its publication *Measures of Australia's Progress*[62] [http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1370.0Main+Features12006%20(Reissue)?OpenDocument]. The headline indicator, when collected over a period, shows the change in average real equivalised weekly disposable (after tax) income of people close to the bottom of the income distribution (the 20% of people in the second and third lowest income deciles). The same Headline Indicator has been chosen here to represent the issue of family economic situations. It is recognised that this indicator does have limitations in addressing the cause and particular financial hardships facing families; ideally a combined indicator of wealth, income and resources would be used. Given this, it is possible that in the future, the Headline Indicator for Family Economic situation might be altered to measure family economic situation more accurately.

Headline Indicator: Average real equivalised disposable household income for households with children in the 2nd and 3rd income deciles.

Calculation: Average real equivalised disposable household income for households with children in the 2nd and 3rd income deciles with children aged 0-12[16].
Source: ABS Survey of Income and Housing
Frequency of data availability: most years from 1994-1995 to 2003-2004.
Scope of collection: national, biennially repeated survey
Disaggregation: state and territory
Priority area reported elsewhere: *Overcoming Indigenous Disadvantage* reports[12], *A Picture of Australia's Children*[2], indicators for Canadian[19], NZ[22], and American children[23], for children in the UK[20] and for European children[24].

[16] The indicator shows the change in average real equivalised disposable income of households close to the bottom of the income distribution – that is, the 20% of households in the second and third lowest income deciles. This group is chosen to represent low-income households, rather than the lowest decile, as data for this latter group has been shown to not accurately reflect the economic resources available to them. For example, the expenditure levels of those in the lowest decile tends to be higher than those in the second and third deciles, suggesting that they have access to alternative economic resources other than income [62].

Supporting Families

Shelter

Rationale:

A child's access to stable, adequate shelter is recognised as a basic human need. Having adequate housing enables people and children to engage with the wider community – socially, recreationally and economically, and can influence both their physical and mental health[51].

The consultation process suggested that while a single indicator covering all that is important to progress in relation to shelter for children is not available, a number of useful indicators of progress might be obtained by looking at shelter affordability or shelter availability and quality. Other issues relevant to housing and children's health, development and wellbeing are related to the quality of the housing and issues relating to overcrowding within houses.

The ABS has identified a need for improvements in data for children and families from socio-economically disadvantaged backgrounds who have inadequate housing (overcrowding, unsafe, structurally sub-standard housing, etc)[4].

Shelter is also a priority area discussed in the following: *Overcoming Indigenous Disadvantage* reports[12], Productivity Commission's *Report on Government Services*[10], indicators for Canadian[19], NZ[22] and American children[23].

Supporting Families

Child Abuse and Neglect

Rationale:

Abuse and neglect has short and long term adverse consequences for children, including injuries, lower social competence, poor school performance, depression, and suicidal and self-injurious behaviours[63]. Child maltreatment may take a number of forms including neglect, physical abuse (including homicide), sexual abuse and emotional or psychological abuse. Children who are subjected to maltreatment can experience fear and bodily harm, poor school performance, learning disorders, poor peer relations, anti-social behaviour and mental health disorders[64].

Child abuse and neglect can be related to a number of risk factors including poor parental mental health, substance misuse, low socio-economic status leading to economic stress and disadvantage and family disruption. Abuse is substantiated if, in the professional opinion of officers of the child protection authority, there is reasonable cause to believe that a child has been, is being, or is likely to be abused or neglected or otherwise harmed.

Data Sources:

There is no reliable measure of the prevalence of child abuse, mainly because of the difficulties in both defining and measuring abuse and neglect. The only available data relates to situations where children have come to the attention of the child protection authorities in each jurisdiction.

The AIHW publishes data on child abuse and neglect notifications (accepted reports), investigations, substantiations (cases where maltreatment is confirmed by statutory child protection services) and children in the out-of-home care system for each State/Territory. These data are a measure of the activity/services of the Government departments responsible for statutory child protection services in each State and Territory. As such, data and the definitions of 'substantiation' are influenced by differences in legislation, policy, practices and data systems. Thus, national aggregation from this data source is problematic.

The AIHW in conjunction with the National Child Protection and Support Services (NCPASS) data group are currently developing a Child Protection and Support Services NMDS containing data on children who have come into contact with the community services departments for protective reasons (including child protection, notifications, investigations and substantiations, children on care and protection orders, and children in out-of-home care). Changes to the method of compilation will facilitate improved comparability across jurisdictions as well as simplifying national reporting requirements for the AIHW.

The ABS has identified a need for improvements in data for Indigenous children around prevalence of child abuse and neglect[4].

Headline Indicator: Rate of children aged 0-12, who were the subject of child protection substantiation in a given year.

Numerator: number of children aged 0-12, who were the subject of child protection substantiation in a given year
Denominator: ABS estimated population of children aged 0-12 years for the reference year.
Source: AIHW Child Protection Statistics
Frequency of data availability: annual
Scope of collection: jurisdictional administrative data
Disaggregation: State and Territory[17], Indigenous status of child, sex, age
Priority area reported elsewhere: *Overcoming Indigenous Disadvantage* reports[12], indicators for Italy[21], *A Picture of Australia's Children*[2], Productivity Commission's *Report on Government Services*[10], indicators for NZ children[22], for children in the UK[20], and for European children[24].

[17] It is widely agreed that caution is needed when comparing data across states and territories for this indicator.

Child Friendly Communities

Family Social Network

Rationale:

Trust, social networks, and norms of reciprocity within a child's family, school, peer group, and larger community have far-reaching effects on their opportunities and choices, behaviour and development.

Access to social support is suggested to have a positive impact on health and to buffer stress[65]. Findings by Vinson (2004) and Putnam (2000) indicate that people living in disadvantaged areas where social cohesion is high, cope better than those from equivalent areas where social cohesion is low. The amount and frequency of contact with family and friends may indicate the strength of a social network[2]."

Social support is one form of social capital. Social capital refers to the quality and depth of relationships between people in a family or community. Children living in communities that have high levels of social capital can benefit from the positive spin-offs of community cohesion. These include: children growing up in relatively safe, low crime neighbourhoods; children being positively influenced by high trust, and cooperative relationships in their surroundings; and children growing up in well resourced areas, relatively free from poverty[2].

Issues of family social network, social support and social capital emerged as important issues to include in the Headline Indicators suite; however, it is not theoretically or conceptually clear which aspects of these issues are most salient in terms of influences on children's health, development and wellbeing, nor what is the best way to measure such issues.

Family social network/capital is a priority area identified in *A Picture of Australia's Children*[2].

Data Sources:

The measurement of social capital and family social networks is currently the focus of much interest and activity.

> "More research on social capital is needed and a core set of social capital measures as they relate to families and children needs to be assessed for their relevance and relationship to particular outcomes of interest. … The lack of relevant indicators of social and family functioning … is a serious impediment to the capacity of departments to produce the relevant information to guide government policy and the development of preventive strategies[66]."

Work completed by Zubrick (2000) on behalf of the then Department of Family and Community Services (FACS) reported on indicators of social and family functioning[66]. Five key resource domains were identified as relevant for social and family functioning influencing child health and wellbeing outcomes including: time; income; human capital; psychological capital; and social capital. Social and family functioning across these five domains should not be considered in isolation as the resource domains interact with one another.

The ABS 2002 General Social Survey collected data on various measures of social and support networks. Data from this survey was reported in AIHW *Picture of Australia's Children*[2] in areas relating to families with children:

- who are able to get support in a time of crisis;
- who are able to ask for small favours from others; and
- who had weekly contact with family and friends living outside the household.

The LSAC might also provide further opportunities to determine the best measure of family social networks. The study aims to examine the impact of Australia's social, economic and cultural environment on children. Questions addressed include how important are family and child social connections to child outcomes? How do these connections change over time and in accordance with the child's age, and does their importance vary across childhood? It is likely that the LSIC might be able to provide information on the importance and characteristics of social networks for Indigenous children. The study aims to improve the understanding of, and policy response to, the diverse circumstances faced by Aboriginal and Torres Strait Islander children, their families, and communities.

Information about social capital and family function was identified by the AIHW as lacking[2]. The ABS has also called for improvements in data for the relationship between family structure, family support and family network patterns and children (particularly those from socio-economically disadvantaged backgrounds) health, development and wellbeing[4]. "A small set of indicators of social and family functioning regularly associated with key outcome data would greatly improve this situation and assist in the provision of accurate and timely information for policy and planning needs."[66]

Further consultation is necessary to identify the relevant concepts relating to family social network, support and capital most salient to include as a Headline Indicator. Further consultation is needed also to develop relevant data collection.

Appendix B: Project consultation and development process

Background to the Headline Indicators project

This project was one of four projects proposed to improve child health, development and wellbeing approved by Health Ministers and Community and Disability Services Ministers in July 2005. At the AHMC meeting on 29 July 2004, it was requested that a report be written on child health, development and wellbeing as a specific area of reform, having regard to the broader whole-of-Government issues in children's services. Preliminary work was undertaken from the health perspective in identifying areas for the development of nationally implementable, specifically practical actions for child health, development and wellbeing reform, and was overseen by the Health Reform Agenda Working Group (HRAWG), with input from members of the Child and Youth Health Intergovernmental Partnership (CHIP) of the National Public Health Partnership. The Community Services Ministers' Advisory Council (CSMAC) subsequently agreed to confer with AHMAC on areas of mutual interest to assist in progressing the specific pieces of work, and to support work priorities.

It was agreed that this initiative should focus on those areas where the most gain could be achieved in relation to intervention and that, in some cases, existing work was available that could provide useful starting points. Furthermore, synergies with existing initiatives and other relevant projects were identified, and linkages were made explicit for each of the priority actions. In July 2005 four specific projects were approved to improve child health, development and wellbeing (listed below), with an associated 12 months of project funding. An overarching cross-sectoral Child Health and Wellbeing steering committee (convened by the Northern Territory) manages these four projects.

The four projects are:

- high-quality antenatal care: a set of guidelines to facilitate national consistency but enable local flexibility of care;
- a consistent and cross-sectoral national approach for identifying and supporting vulnerable families in the antenatal period and early years;
- child health, development and wellbeing Headline Indicators, to be reported to Health and Community Services Ministers annually; and
- core common national child health and wellbeing competencies for all who deliver care to children.

Purpose of the Headline Indicators project

The aim of the Headline Indicators Project was to develop nationally agreed Headline Indicators to monitor the health, development and wellbeing of Australian children. Underpinning processes to facilitate data collation, analysis and reporting were also to be explored.

Project management arrangements

A strategic project steering group chaired by Victoria was established to direct the project. The project steering group consisted of experts from:

- WA Department of Health
- AIHW
- ABS
- DHS Victoria
- DoHA

Representation/expertise from the education sector was unable to be sourced at the time for the project steering group.

The project steering group met regularly and a project manager, based at DHS Victoria, was engaged to progress the project.

Headline Indicators project activities

A review of relevant literature

A review of literature on Headline Indicators was conducted in January 2006. Recent published journal articles were sourced through database searches for material on key indicators/measures of child health, development and wellbeing in Australia and internationally. Further published and unpublished materials were sourced through recommendations from Steering Group members and consultation with key jurisdictional contacts.

The review of relevant literature informed the early developmental work on a set of Headline Indicators and directed discussions during consultations. A discussion of the outcomes of the review of the literature is available in Appendix C.

Consultation with Stakeholders

The project team engaged in two rounds of consultation with key jurisdictional organisations and data-related committees to gain feedback through the project. Consultation was undertaken with:

- ABS
- ACT Government
- AESOC Early Learning Working Group
- AESOC PMRT
- AESOC Senor Officials Working Party on Indigenous Education
- AIHW
- Antenatal Guidelines Project Steering Group
- Australian Government DoHA
- Australian Government FaCSIA
- Housing Ministers' Policy Research Working Group
- National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data (NAGATSIHID)
- National Child Protection and Support Services (NCPASS)
- National Community Services Data Working Group (NCSDWG)
- NDA
- NCSIMG
- NPHIWG
- NSW Commission for Children
- NSW Department of Community Services
- NSW Department of Health
- NT Government
- QLD Government
- SA Government
- SIMC
- Tasmania Department of Health and Human Services

- Telethon Institute for Child Health Research
- Victorian DHS
- WA Department of Community Development
- WA Department of Health
- Women's Hospitals Australasia

The Australian Government Department of Education, Science and Training (DEST) members contributed through participation in AESOC taskforces.

The project Steering Group engaged in two rounds of consultation for the project. The first consultation process was conducted in late February/early March 2006 through face-to-face meetings with appropriate personnel from each jurisdiction/national data group and members of the project team. These preliminary meetings explored relevant issues through the use of targeted questions and semi-structured interviews.

The preliminary consultation identified a range of policy relevant priority areas (and sometimes associated indicators) for consideration in the Headline Indicators suite. Initially, these proposed policy areas were assessed to see if first, they were broad conceptual issues for health, development or wellbeing, and then to determine if they were relevant to State/Territory and Australian Government policy and agendas.

The availability of data was not taken as a primary selection criterion, in order to capitalise on opportunities for innovation in data development. The process involved a first round selection on the basis of policy relevance and summary status, and a second round of assessment in which data availability and precise indicator definition was established. Potential indicators to reflect the priority areas were considered, based on previous literature and preliminary consultations. At the level of precise definition, potential indicators were then assessed in relation to the following criteria:

1. indicator is sensitive to intervention strategies;
2. indicator is unambiguous in meaning and interpretation and is based on sound empirical evidence;
3. data collection is methodologically rigorous;
4. data are capable of reflecting differences and diversity in sub-groups including:
    I. Aboriginal and Torres Strait Islander children
    II. children with a disability
    III. children from CALD backgrounds
    IV. children from socio-economically disadvantaged backgrounds
    V. geographically defined groups (i.e. rural and remote areas, states and territories).

The feedback from the preliminary consultations and the review of the Australian and international literature was considered and a draft report was produced, outlining proposed priority areas and, where possible, potential indicators for these priority areas. This draft report was then sent to key jurisdictions and relevant national data groups in March 2006, and feedback was received in mid-April 2006. The proposed priority areas and Headline Indicators were then refined further in response to formal feedback for this report.

The age range for the Headline Indicators.

A decision was made to restrict the age range for the Headline Indicators to 0-12 years of age.

Definitions for what constitutes the age range for 'children' vary considerably in Australia and internationally. Definitions can be based on legal definitions, theories of child development and/or levels of dependency at different stages from birth to transitions to youth. The ABS argues:

> "Given the diversity of purposes for which information is needed about children and youth, there is difficulty in determining clear, yet flexible, age standards for use in data collection and outputs to suit all user purposes and ensure comparability across information sources[4]"

While it would be valuable for all collections relating to children in Australia to use the same age ranges, this is not currently the case.

The age range of 0-12 is different from that currently reported in other publications (such as the AIHW's *Picture of Australia's Children*[2] which reports to the age of 14 years). It was considered prudent to include issues relevant to children during the early years (given the increased policy focus recently) but also not to exclude issues relevant to children within the middle years. It was considered more appropriate to cover issues ranging from birth through to 12 years rather than develop three sets of Headline Indicators (one for early years, one for middle years and one for youth).

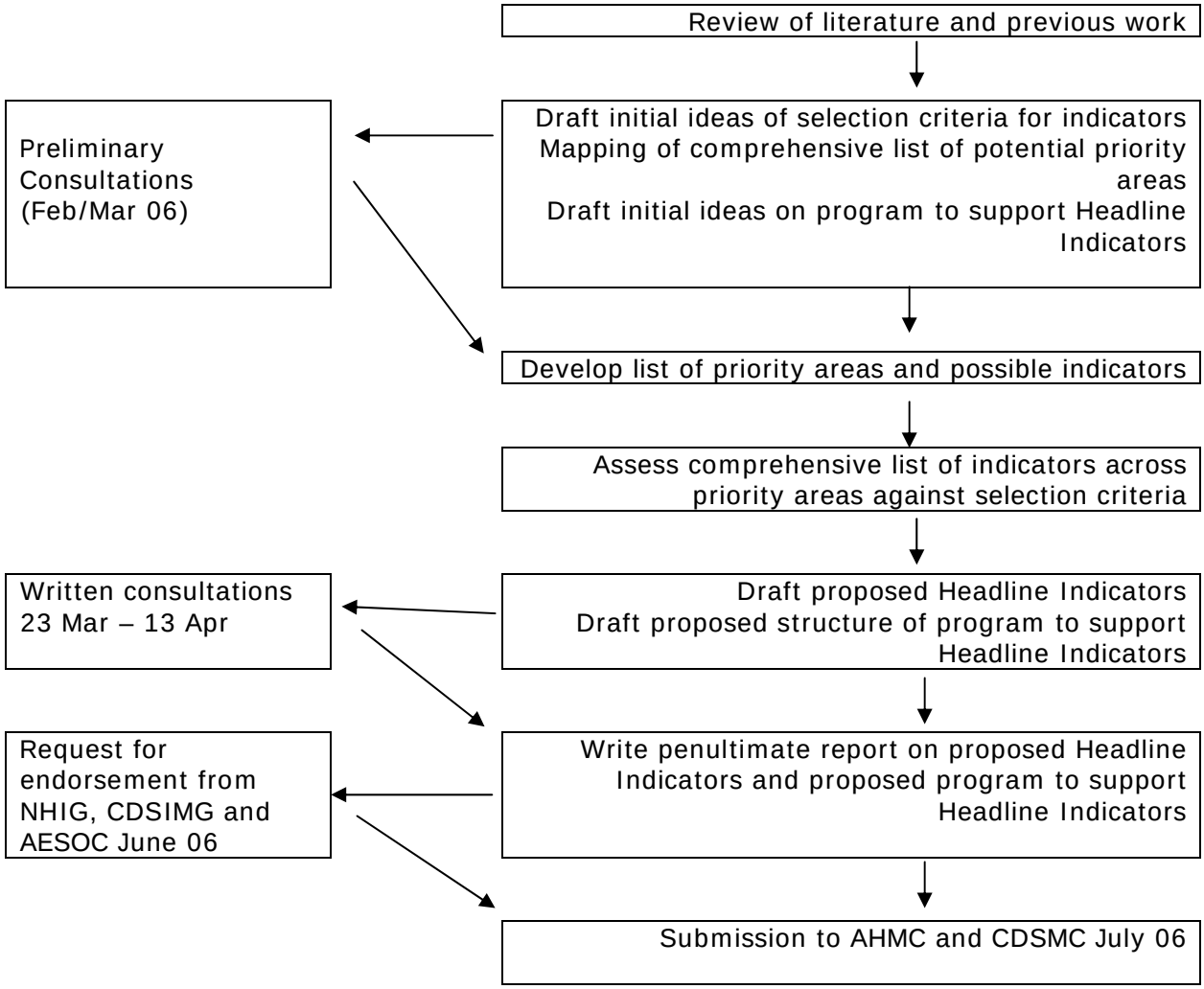
It should be noted, however, that age groupings for ABS denominator data (e.g. 10-14 years) might require calculation of indicators to 14 years of age in some instances.

Issues relating to youth were seen to be beyond the scope of the Headline Indicators. Consultation feedback for this project demonstrated considerable support from jurisdictions for the separate development of a set of Headline Indicators for youth (over 12 years of age) given the differing factors that impact on youth health, development and wellbeing (such as risk-taking behaviour, physiological puberty etc).

Endorsement of Headline Indicators project report

The final draft of this report was endorsed by AHMC, CDSMC and NHIG, NCSIMG and AESOC. It was also sent to the COAG Early Childhood Subgroup for information.

Chart 2: Methodology for Headline Indicators for Children's Health, Development and Wellbeing Project



Appendix C: Review of literature and resources

The Headline Indicators Project aimed to develop national, jurisdictionally agreed Headline Indicators to measure and monitor the health, development and wellbeing of Australian children and to explore processes to facilitate ongoing data collation, analysis and reporting. A review of literature on policy and measurement issues around children's health, development and wellbeing was conducted, focusing on the following issues:

- relevant State/Territory Government policy initiatives, agendas and projects;
- national and international reports of issues relevant to child health, development and wellbeing indicators;
- frameworks for conceptualising national indicators; and
- the selection process used for national indicator suites.

Methodology of review

A review of literature on Headline Indicators was conducted in January 2006. Recent published journal articles were sourced through searching of databases (ProQuest, Medline and PubMed) for material on key indicators of child health, development and wellbeing in Australian and internationally. The search was restricted to material published after 2000.

Further published and unpublished materials were sourced through recommendations from Steering Group members and consultations with jurisdictions and national data groups.

Relevant Government policy initiatives and agendas

A number of Government initiatives and cross-jurisdictional working parties have led to the need for better data, quality and availability in relation to children's health, development and wellbeing. Many State/Territory Governments have expressed their visions for monitoring the health, development and wellbeing for their children in specific policy documents and initiatives.

The following Government policy initiatives and agendas were considered in the developmental stages of the project and are reflected wherever relevant in the proposed Headline Indicators:

- *A Head Start for Australia: An Early Years Framework*, NSW Commission for Children and Young People and the Commission for Children and Young People in QLD[67];
- *A Picture of Australia's Children*, AIHW[2];
- *Australia's National Plan of Action for Children and Young Peoples* (Australia's response to the UN Special Session on Children, May 2002)[8];
- *Be Active Australia: A Health Sector Agenda for Action on Physical Activity 2004-2008[68];*
- *Best Start Initiative*, Victorian Government[69];
- *Children First Strategy*, WA Government[70];
- *Children's Plan*, ACT Government[71];
- *Eat Well Australia: An Agenda for Action for Public Health Nutrition 2000-2010[72];*
- *Families First Strategy*, NSW Government[73];
- *Healthy Mouths Healthy Lives: Australia's National Oral Health Plan 2004-2013[74];*

- *Healthy Weight 2008: Australia's Future: The National Action Agenda for Children and Young People and their Families*[35];
- *Draft National Children and Youth Information Development Plan*, ABS[4];
- *National Aboriginal and Torres Strait Islander Nutrition Strategy and Action Plan 2000-2010*[75];
- *National Breastfeeding Strategy*, DoHA[76];
- *National Injury Prevention and Safety Promotion Plan 2004 – 2014*[77];
- *National Mental Health Plan 2003-2008*[78];
- *National Public Health Information Plan 2005*[79];
- *The National Public Health Strategic Framework for Children 2005-2008 – Healthy Children: Strengthening Promotion and Prevention across Australia*[7];
- *National Strategic Framework for Aboriginal and Torres Strait Islander Health 2003-2013*[80];
- *Our Kids Action Plan 2004-2007* Tasmanian Government[81];
- *Overcoming Indigenous Disadvantage: Key Indicators 2003*[12];
- *Putting Families First Policy Statement*, QLD Government 2001[82];
- The draft *National Agenda for Early Childhood*, Australian Government (under development)[6];
- The *National Injury Prevention and Safety Promotion Plan: 2004-2014*[77]; and
- The *Stronger Families and Communities Strategy*, Australian Government[83].

International and Australian child health, development and wellbeing issues

Considerable work has been completed both in Australia and internationally around indicators to monitor children's health, development and wellbeing.

Australian child health, development and wellbeing

The current project builds on the Australian work done to date in developing indicators of child health, development and wellbeing, most notably the work completed by the ACCAP, the ABS and the AIHW.

The AIHW has a number of publications that act (in lieu of jurisdictionally agreed Headline Indicators) as a national status report on children's health and wellbeing in Australia. Building on early publications[84] [85], the recently released *Picture of Australia's Children*[2] provides national statistics (where possible) on a comprehensive, broad range of issues affecting children's health and wellbeing including:

- mortality;
- morbidity;
- disability;
- mental health;
- immunisation;
- breastfeeding;
- dental health;
- birth weight;
- smoking during pregnancy;
- environmental tobacco smoke within the home;
- overweight and obesity;
- tobacco use;
- alcohol misuse;
- injuries;
- child abuse and neglect;
- children as victims of violence;
- homelessness;
- preschool education;
- literacy and numeracy;
- children and crime;
- family structure and functioning;
- economic security;
- children in out-of-home care;
- parents with disability of chronic illness; and
- neighbourhood safety and social capital.

In line with contemporary thinking about indicator development and children, the publication takes an ecological approach and attempts to provide indicators that cover outcomes, determinants and system performance. A number of challenges to data quality, availability and consistency are identified in the latest report.

The AIHW publication, *Australia's Welfare 2005*[51] also provides a chapter dedicated to issues for children and youth. Issues covered include:

- transition from early childhood to school;
- childcare;
- preschool;
- risks associated with childhood;
- child protection and out-of-home care;
- trends for Indigenous children; and
- children in homeless families.

The Headline Indicators Project builds upon the work already undertaken for ACCAP in a series of workshops[1] gauging potential indicators for the AIHW *Picture of Australia's Children*[2] and for Headline Indicators. In 2005, ACCAP hosted a workshop to progress the discussion of 'Headline Indicators' in response to the identification of Headline Indicators as a priority under the Health Reform Agenda and during the State/Territory consultations for the *Draft National Agenda for Early Childhood*[6]. The workshop provided direction for the current project in relation to work which was currently underway, international perspectives, opportunities and challenges, purpose and audiences for Headline Indicators and possible criteria for including/excluding indicators[86]. The report outlined the purpose of Headline Indicators were to:

- see where we are and to suggest what needs to be done;
- act as a flag or predictor;
- build agreement about what is important to do;
- build commitment to act;
- promote debate on what the indicators mean for action and for achievement;
- promote accountability for Government and the public sector;
- support community empowerment;
- promote partnerships and collaborations;
- inform resource allocation;
- provide feedback to child health workers about performance;
- inform planning and the setting of future directions; and
- inform system reform and redevelopment.

The ABS has also completed significant work in the area. Most notable is work around the measurement of wellbeing for the whole Australian population in areas such as family and community, health, education and training, work, economic resources, housing, crime and justice and culture and leisure[87].

More specifically relating to information about children's wellbeing, the ABS published a report in 1999 *Children, Australia: A Social Report*[88] covering information about:

- the child population in Australia;
- social environments (such as living arrangements, childcare, children at risk);
- economic environment factors affecting children (including low income families, labour force participation, etc);
- the physical environment (such as housing, homelessness);
- health (covering mortality, risk factors and preventive health measures); and
- education (preschool, primary, secondary).

Most recently, the ABS has released a *Draft National Children and Youth Information Development Plan*[4] for consultation. The plan, when finalised, will be an agreement among key stakeholders in the field of children on the statistical development work required to better inform and support policy decision-making for Governments and practitioners. The plan identifies key issues relating to children's health, development and wellbeing, discusses relevant data sources for information and data development needs. A number of improvements are needed in:

- agency collaboration across the field of child information;
- data comparability across collections and jurisdictions;
- development of standards and concepts relating to children;
- improvements in the quality of data for specific populations of children;
- improvements in the range and quality of small area data;
- improved use of existing data sets; and
- improved data collections that allow pathways to be identified.

Throughout this report on the Headline Indicators, it is noted where the *draft National Children and Youth Information Development Plan*[4] and the AIHW *Picture of Australia's Children*[2] has identified a data development need or gap in information.

Where possible, the program to support Headline Indicators capitalised on the work already completed in these areas. By and large, the outcomes of the Headline Indicators Project extend the work already completed on indicators for children's health, development and wellbeing in Australia.

International indicators of children's health, development and wellbeing

A number of other countries have progressed with development, agreement and reporting on indicators of children's health, development and wellbeing.

The NZ Government has published a report on national indicators of wellbeing for children and young people[22]. Relevant indicators included:

- population statistics;
- birth weight;
- infant mortality rate;
- hearing failure at school entry;
- obesity;
- under-18 birth rate;
- positive relationships with parents;
- child abuse and neglect;
- low-income families;
- low living standards;
- food security;
- unintentional injury mortality rate;
- intentional injury mortality rate;
- intimidation at school;
- attendance at early childhood education;
- literacy and numeracy;
- school truancy;
- language (Maori);
- internet access in the home;
- household crowding; and
- participation in sport and active leisure.

The report focuses on children and youth aged 0-18 with an emphasis on reporting results for Maori New Zealanders.

The Ministry of Health in Italy has completed work on a minimum set of health indicators to report on the health of Italian children and to be used in health planning at local and regional levels. Both outcome and systems indicators are included covering areas of:

- fetal death;
- neonatal mortality;
- infant mortality;
- mortality for children 0-14;
- birth weight;
- congenital malformations;
- disability;
- child abuse and neglect;
- child HIV;
- teenage pregnancies;
- caesarean births;
- breastfeeding;
- immunisation rates; and
- admission to hospitals and special care institutions.

The focus on the Italian set of indicators is health outcomes *per se* with few indicators related to determinants of health, or family and community context influences on health, development and wellbeing.

The UK also reported on a set of comprehensive indicators of health for UK children and youth[20]. Information was reported on:

- the child population;
- diet;
- nutrition;
- dental health;
- exercise;
- infectious diseases;
- asthma;
- allergic diseases;
- disability;
- mental health (focusing on mental ill-health and disorders);
- provision and use of services (including child protection);
- drug use, smoking and drinking;
- adolescent sexual health;
- social inequalities;
- congenital abnormalities; and
- childhood cancers.

In 2000, the Canadian Government agreed to improve services and programs for children under six years of age and to report regularly on indicators of wellbeing. The most recent report has taken an ecological approach and included descriptions of key family and community influences on children's wellbeing as well as trend data[19]. Indicators included:

- healthy birth weight;
- pre-term birth weight;
- incidences of Meningococcal, Measles and Haemophilus Influenzae-b;
- infant mortality rate;
- breastfeeding;
- injury hospitalisation;
- motor and social development;
- disability;
- emotional problems;
- physical aggression;
- personal and social behaviour; and
- language skills.

More recently indicators of air, water and food quality, asthma, parenting skills, family income, parental education, tobacco use in pregnancy, parental depression, parental smoking, positive family functioning, reading by adults, neighbourhood cohesion, neighbourhood safety and core housing need have been included.

The Child Health indicators of Life and Development (CHILD) project forms part of the European Health Monitoring Program and measures assessment of children's health on a number of indicators across European member countries[24, 89, 90]. CHILD denotes indicators across a number of issues including:

- demography;
- socio-economic status and inequalities;
- social cohesion/capital;
- migrants;
- marginalised children;
- family cohesion;
- mental health;
- quality of life;
- wellbeing;
- lifestyles;
- health promotion;
- nutrition and growth;
- intellectual and social development;
- mortality;
- morbidity;
- injuries;
- environment; and
- access and use of services.

Although focused primarily upon health indicators, the CHILD project recognises the influence of family, social and community influences on health and wellbeing.

In America, an annual report is published titled *Trends in the Well-being of America's Children and Youth*[23] – akin to the AIHW *Picture of Australia's Children* in Australia[2]. The report collates information from a range of sources for 80 indicators of children's health, development and wellbeing covering the domains of:

- population;
- family and neighbourhoods;
- economic security of the family;
- health conditions and health care;
- social and behavioural development; and
- education and achievement.

The breadth of indicators in the American report suggests an ecological approach to considering child health, development and wellbeing and an attempt is made to include outcome, determinants and systems indicators.

Contemporary approaches to measurement

This report builds on significant work undertaken in the definition and measurement of children's health, development and wellbeing both in Australia and internationally. Contemporary thinking around measurement of indicators appears to be characterised by a number of principles:

- indicator sets should broadly cover the domains of health, development and learning, safety and wellbeing;
- indicator sets should recognise determinants of health, development and wellbeing at the individual, family and community level;
- indicator sets should be based on an ecological approach[9] to children's health, development and wellbeing;
- indicator sets should measure risk and protective factors of health, development and wellbeing;
- indicators should include outcome, determinants and systems indicators; and
- indicators should be relevant to the diversity of Australian children.

Where possible, these principles have been included in the development of the Headline Indicators.

Most notable, when considering international indicators of children's health, development and wellbeing, is that most countries have used a 'comprehensive' approach to indicator selection. Canada, America, NZ and the UK report on a comprehensive set of indicators – much as the AIHW does in *A Picture of Australia's Children*. The selection and reporting of indicators do not appear to be designed to articulate the most policy relevant issues that are amenable to change, nor is the selection and reporting linked to a 'program' of Government accountability for the outcomes. Australia appears to be leading the way in developing a set of policy-relevant Headline Indicators by which Governments can monitor and respond to changes in the health, development and wellbeing of Australian children.

Review of frameworks used for children's health, development and wellbeing

As part of the literature review, possible frameworks were considered to assist in organising and consolidating the work done to date on children's health, development and wellbeing. Very few frameworks were identified that span the breadth of health, development and wellbeing, most frameworks being developed to address a particular sector (i.e. education or health).

The Australian Government's draft *National Agenda for Early Childhood*[6], which is focused on children aged 0–8 years, frames issues for children's health, development and wellbeing into the main areas of:

- Healthy Young Families - improved postnatal and pregnancy care, health promotion, early recognition of children with, or at risk of, ill health, effective early interventions;
- Early Learning and Care - access to early learning and care, support for carers and parents, education and family support, early identification of and intervention of at-risk children;
- Supporting Families and Parents – improved access to support services, parenting education, family assistance including income support and childcare, access to parenting information; and
- Child Friendly Communities – fostering flexible and responsive services at local levels, better coordination of services, reduction of family violence, assessment of risks to children, community provision of children's activity opportunities.

The AIHW *A Picture of Australia's Children 2005*[2] organises indicators of children's health and wellbeing into a framework of questions including:

- How healthy are Australia's children?
- How well are we promoting healthy child development?
- What factors can affect children adversely?
- How safe and secure are Australia's children?
- How well are Australia's children learning and developing?
- What kind of families and communities do Australia's children live in?

The *National Health Performance Framework*[91] considers health within three conceptual tiers.

- Tier 1. Health Status and Outcomes – includes concepts relating to the health of all Australians, health inequalities and health opportunities. Health conditions, human functions (impairment, limitations and restrictions), life expectancy and wellbeing (broad measures of physical, mental and social wellbeing) and deaths are considered.

- Tier 2. Determinants of Health – includes factors relating to issues that determine good health, differences in determinants and where and for whom these factors are changing. Environmental factors (food, soil quality), socio-economic factors (education, employment, per capita health spending), community capacity (population density, housing etc), health behaviours (patterns of smoking, nutrition, physical activity) and person-related factors (genetic susceptibility) are considered.

- Tier 3. Health System Performances – includes factors relating to the performance of Australia's health system and services. Effectiveness, responsiveness, continuity, appropriateness, accessibility, capability, efficiency, safety and sustainability are considered.

The *Overcoming Indigenous Disadvantage* report provides a framework with three tiers of priority outcomes, Headline Indicators and strategic areas for action for Indigenous people:

- Safe, healthy and supportive family environments with strong communities and cultural identity;
- Positive child development and prevention of violence, crime and self harm; and
- Improved wealth creation and economic sustainability for individuals, families and communities.

In the Headline Indicators Project, a framework was used in the preliminary stages to help 'map' the theoretical issues of children's health, development and wellbeing, define the scope of the indicators and identify important concepts for consultation. For the purpose of organising the material, the framework proposed in the *draft National Agenda for Early Childhood* was used, as it covers a broad range of health, development and wellbeing spectrums that affect all children in Australia.

Given the focus of the project was on (a limited number) of Headline Indicators, it was not the intention that a framework would act as a strict guide to indicator selection – that is, it was not the intention to populate each cell in a given framework for this project. It is expected that the 'suite' of Headline Indicators could be 'mapped' to most frameworks used to consider the health, development or wellbeing of children across the health, community services or education sectors.

Review of selection processes for indicator suites

At the core of the project was a dilemma in selecting appropriate measures of children's health, development and wellbeing – the selection of Headline Indicators. "Indicators are particular data items or amalgams of data items that relate to key concept of components within frameworks. The term 'indicator' may suggest a theoretical relationship (possibly causal) … between the data collected and the concept on which information is sought."[51]

In the case of children's health, development and wellbeing, the possibilities of measuring relevant concepts are almost endless; spanning health issues and outcomes, health systems, social determinants of health (family structure, socio-economic variables, neighbourhood safety etc), developmental milestones and learning and educational attainment. For any particular issue, there will be numerous possible 'indicators' from which to select. For example, for the area of immunisation, any of the following are appropriate indicators of measurement:

- rate of immunisation for particular diseases in all Australian children;
- number of children with full immunisation in Australia;
- rate of vaccine-preventable diseases in children in Australia; or
- number of parents who choose not to immunise their children.

The challenge for the current project was to select a relatively small number of indicators to be included as 'Headline Indicators'. Headline indicators form a core set of national population-level statistics for reporting on the progress made in health, development and wellbeing for Australia's children. The range of 'headline' indicators at any one time will be a subset of all possible indicators, influenced by the interests of Government policy and the feasibility of data collection.

Although this project aimed to articulate the first set of Headline Indicators - what is considered important to national policy - conceptual developments relating to one or more health, development or wellbeing issues and statistical developments in measuring aspects of progress are likely to impact on the 'set' of Headline Indicators considered appropriate at any time. It is for this reason that the rationale and justification for selecting indicators to be included in the Headline Indicators set needed to be clearly defined.

As part of the broader literature review for the project, information was sought relating to the methodological and theoretical approach taken in selecting indicators for measurement – this extended beyond information in the health arena and in to social, welfare and economic measurement areas.

The literature review found limited information on the processes used to select national indicators to measure health, development and wellbeing (for children or otherwise). Notably, even for those few publications that use 'headline indicators' (such as the ABS' *Measuring Australia's Progress*[92]) no discussion is provided to specify the distinction between a 'headline' as opposed to other type of indicator. The only significant discussion of headline indicators appears in the report of the ACCAP *Headline Indicators Workshop*[86].

Of all the publications sourced where criteria were explicitly used to select indicators, some criteria were consistently mentioned. It is these criteria that were included in the recommended list below and used for the purposes of selecting Headline Indicators.

High-level summary indicator for a health, development or wellbeing issue

Headline indicators should reflect national summary statistics that describe how Australian children are faring for a broad conceptual issue. Headline indicators provide a benchmark by which to monitor improvements across Australia in broad areas of children's health, development and wellbeing (i.e. obesity in children), but are not designed to provide detailed knowledge about the cause of specific improvements (i.e. amount of fast food eaten, rates of exercise, etc). The requirement for indicators to reflect national summaries has been previously suggested in Australian literature

discussing the selection of indicators (see [87]) and in international discussions of children's indicators (see [23] [22]).

Relevant to State/Territory and Australian Government policy and agendas

Headline Indicators need to be relevant to the majority of State/Territory and Australian Governments' policy agendas. Data for these indicators need to provide 'headline' messages about issues that are influenced by policy action and are useful for policy development and advocacy processes. The requirement for indicators to be relevant to State/Territory and national policy has been emphasised in a number of Australian publications discussing the selection of child health, development and wellbeing indicators (see [91] [2] [51] [86] [93]) and in international discussions of children's indicators (see [94] [95]).

Sensitive to intervention strategies that are evidence based

There should be good evidence that Headline Indicators are sensitive to intervention and responsive to changes in the underlying phenomena. Headline Indicators should only be included if there is a possibility of interventions affecting results in a positive or negative manner, over time. The need for indicators to be sensitive to interventions is emphasised in most Australian sources discussing the selection of child health, development and wellbeing indicators (see [92] [86, 87] [93]) and was a criterion used to select indicators for American and European children[24]. Theoretical discussions of indicator selection also emphasise the need for indicators to be sensitive to intervention and amenable to change[96].

Unambiguous in meaning, interpretation and based on sound empirical evidence

Headline Indicators need to be easy to understand by a variety of audiences. Trends in data should be able to reflect clear and unambiguous improvement or regression in the status of Australia's children for that particular indicator. The need for indicators to be easy to understand and unambiguous is emphasised in most Australian sources discussing the selection of child health, development and wellbeing indicators ([91]; [51]; [92]; [51]; [93]; [66]) and was a criterion used to select indicators for American[23], NZ[22] and European children[24]. It is discussed as a critical consideration in selecting indicators in other publications ([97]; [94] [98] [95] [96]).

Data collection is methodologically rigorous

The data for each Headline Indicator should be collected, analysed and reported in a way that is statistically reliable and valid. Broadly speaking, the data should be collected consistently and repeatedly over time to produce time-series information and, where possible, should be collected from one national data source or from comparable data sources nationwide. Issues around statistical rigour are raised in most discussions of selection of national indicators both in Australia ([91]; [51]; [92]; [86]; [93]) and internationally ([23]; [94]; [98];[96]).

Data capable of reflecting differences and diversity

The information produced for Headline Indicators needs to be able to reflect variability in results for a diversity of populations. For Australian children, the Headline Indicators will need to reflect diversity for the sub-populations of Aboriginal and Torres Strait Islander children, children from CALD backgrounds, children in low socio-economic situations and children of different ages and sex. Furthermore, information should be disaggregated by geographic area (in some way) to reflect differences based on State or Territory location

or rurality. The requirement for indicators to be measurable for diverse populations is considered important in selecting indicators in Australia (see [91];[2]; [51, 87, 92]; [86]; [66]) and internationally (see [22]; [94]).

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