3 Development of the Children's Services National Minimum Data Set

A national minimum data set (NMDS) is essentially a common set of data items, definitions and data standards pertaining to children's services, agreed to by all jurisdictions. This could be used, with agreement from all parties, as the basis for developing comparable jurisdictional databases and data collection systems, refining national reporting systems, or developing an entirely new national data collection process.

The Children's Services Data Working Group (CSDWG) aimed to develop a NMDS about child care and preschools that:

- provided a solution to nationally comparable data about children in care
- enabled the development of indicators to monitor national trends
- allowed the evaluation of policies that affect children's services
- provided linkages with other relevant data sets that relate to children.

It was also important that the NMDS enable the following key questions to be answered:

How many children are receiving child care and participating in preschool activities in Australia?

- What are the characteristics of these children?
- How many child care and preschool services are there in Australia?
- Where are these services and what type of care do they provide?
- How are the available child care and preschool activities being used by children?
- To what extent do workers delivering child care and preschool activities have relevant qualifications and/or experience?

It was agreed that the NMDS should be an 'administrative by-product collection', i.e. one in which the data are collected via normal administrative processes such as attendance forms and service agreements. It was also important that the data items were able to be collected with minimal respondent burden, and that they were of a reasonably high data quality.

The CSDWG also recognised that concepts like satisfaction and some key issues such as parents work patterns and income level are not usually able to be collected from administrative data. This type of information would still need to be collected via supplementary processes such as surveys undertaken by the Department of Families, Community Services and Indigenous Affairs (FaCSIA) and the ABS.

Development of the CSNMDS is described in the sections below. In addition, Box 1 provides a summary of the time line and main milestones.

3.1 Review of existing information

In 1998 and 1999, the AIHW and FaCSIA (then the department of Family and Community Services; FaCS) jointly reviewed a number of existing state and national children's services data collections. This was with a view to examining the scope of existing collections and service structures and to make recommendations about the development of the proposed

CSNMDS. The findings of this review were published in the report *Comparison of data items in selected children's services collections* (AIHW & Department of Family and Community Services 2000). The report examined four data collections relating to children's services—the FaCS 1997 Census of Child Care Services, the 1996 ABS Child Care Survey and the 1997 Victorian and South Australian children's services data collections. It also considered other data collections or definitions where relevant, in order to illustrate other approaches to the issues under discussion. The report made a number of recommendations relating to scope, definitions of service types, and school and population-based data items for children, workers and families, and other characteristics of children and families.

Box 1: Key stages in the development of the Children's Services National Minimum Data Set (CSNMDS)

April 1998	*Children's Services Data Working Group (CSDWG) established*
Late 1998–99	*Review of existing children's services data collections*
1999	*Development of Children's Services National Minimum Data Set (CSNMDS) manual version 1*
Oct. 2000	*Initial field test of CSNMDS, version 1 (NSW, Qld, Tas, ACT)*
2001	*Australian Institute of Health and Welfare and CSDWG prepare the draft CSNMDS specifications*
Aug. 2002	*Phase 1 pilot test against the draft CSNMDS specifications.*
July 2003	*National Community Services Information Management Group noted the phase 1 pilot test results and endorsed further work.*
Oct. 2003	*Community and Disability Services Ministers' Advisory Council noted progress with the CSNMDS and endorsed in principle the further development of the data set.*
Dec. 2003 – May 2004	*AIHW and CSDWG develop the draft CSNMDS specifications, version 2*
Sep. 2004	*Phase 2 pilot test against the second draft of the CSNMDS specifications (all jurisdictions).*
Feb. – June 2005	*AIHW and CSDWG develop the final CSNMDS specifications.*
2 June 2005	*CSDWG approve the final CSNMDS specifications, Version 0.4.*
15 July 2005	*NCSIMG provisionally approve the CSNMDS its final specifications pending the resolution of minor issues.*
Nov. 2005	*Minor issues with the CSNMDS specifications resolved – CSNMDS specifications approved.*
Aug. 2006	*CDSMAC indicated a commitment to the ongoing development of the CSNMDS by agreeing to consider a funding proposal to undertake a cost–benefit analysis of implementing the CSNMDS.*

3.2   Initial field test

Drawing on the recommendations of the *Comparison of data items in selected children's services collections* report, the AIHW, in association with the CSDWG, developed version 1 of the CSNMDS data manual. Field testing was undertaken in late 2000 in Queensland, Tasmania, New South Wales and the Australian Capital Territory, with 17 services participating.

One of the main findings of the field test was that services often provided more than one type of care activity type, e.g. 'long day care' and 'occasional care'. Collecting data on the basis of whether a service was a long day care centre, an occasional care centre, sessional preschool or an outside school hours care service was not appropriate when these services offered multiple forms of care for children. It was also difficult to distinguish 'occasional care' from 'regular part-time care', regardless of whether these activities took place in a dedicated occasional care centre or a long day care centre.

It was agreed that information on the types of services provided would be collected from administrative records rather than from the service[1] and the data manual was revised accordingly (AIHW 2001).

3.3   Phase 1 pilot test

The phase 1 pilot test of the draft CSNMDS specifications was conducted in August 2002. The pilot test included 43 children's services selected by state and territory representatives of the CSDWG.

The pilot test aimed to assess the feasibility of the proposed data collection and its potential to produce nationally consistent, comparable, comprehensive and useful data. The pilot test also aimed to:

- test the feasibility of using common questions on standard collection forms across several different types of funded services

- test whether specific data items (child's age, arrival and departure times, school status and qualification status of paid primary contact worker) enabled children attending 'preschool' or 'school-age care' programs to be identified

- assess respondent burden

- trial the construction of a unique identifier (ID) for each CSNMDS service.

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1   Although the term 'outlet' is used in the data manual, the word 'service' was used in the pilot test, since service providers in the field test disliked the term 'outlet'. In this report, the term 'service' will be used to refer to 'outlet' and 'service activity' to refer to the service offered, in order to be consistent with the pilot test data collection forms.

Original plans to test a statistical linkage key[2] were dropped as it was decided that it would be premature to test such a linkage key without first testing the feasibility and practicality of collecting unit record data.

The 19 data items tested were divided into three broad categories; service, worker/caregiver and child (see Table 2).

In July 2003 NCSIMG considered these preliminary results and endorsed further work of the CSNMDS. This work was subsequently presented to and endorsed by the Community and Disability Services Ministers' Advisory Council (CDSMAC) in October 2003.

Table 2: Data items tested in the phase 1 pilot test

Service	Worker/caregiver	Child
Service identifier (ID)	Worker identifier (ID)	Child identifier (ID)
Service address	Qualification status	Date of birth
Weeks of operation—per year		Sex
Days of operation—per week		Indigenous status
Start time		School child status
Finish time		Arrival times at service
Service delivery mode		Service departure times
Service delivery setting		
Licensed places		
Places offered		

The phase 1 pilot test made 33 recommendations covering the collection methodology, the scope of the services, children's and workers' collections, and specific data items in the collections (details provided in Appendix C). A greater proportion of these recommendations related to further defining the scope of the CSNMDS and clarifying, for example, which children, services and workers to include and exclude.

The CSDWG endorsed 27 of the 33 recommendations arising from the pilot test. These are listed below in Table 3. They agreed that the next phase of development of the CSNMDS should include more data items on all three areas of the collection; children, services and workers. They also agreed that a revised draft of the CSNMDS specifications should be prepared and tested in the phase 2 pilot test (AIHW 2006a).

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2   The purpose of a linkage key is twofold:

- to enable data from different collections, or the same collection over time, to be linked. Because a linkage key is not a unique personal identifier, confidentiality of personal data can be protected—Appendix E provides details of the proposed linkage key

- to ensure no double counting, as the same child may access two different services at different times/days of the week.

Table 3: Phase 1 pilot test recommendations agreed by the Children's Services Data Working Group

No.	Recommendation
Collection methodology	
2	Forms based on three main types of delivery mode (centre-based, family day care/in-home care, and mobile services) have worked well for the pilot test and should continue to be used in the next phase of the pilot test.
Scope—services and activities	
3	That the term 'outlet' be changed to 'service' and 'service' to 'service activity'.
4	That government funding refers to 'receive ongoing government funding and/or approved for Child Care Benefit'.
5	That for family day care services, the scope specifically states 'including caring for children occupying an in-home care place'.
6	Funded service activity type data element be included for future data collection.
7	That 'primary school education' is not referred to specifically as exclusion.
Scope—children	
8	To include children who are absent for the entire collection week where a place has been kept vacant for that child, or their place has been paid for or will be paid for, or where the child has a 'permanent booking'.
9	That all absent children as defined above should be recorded using the 'child absent' tick-boxes on days where they would normally attend.
10	That child characteristics should be collected in order to ascertain whether certain defined groups of children account for a higher proportion of absences.
Scope—workers	
11	Workers who are absent from the service for the entire collection week should be included in the scope of the collection.
12	Relief workers who are employed during the collection week to replace workers who are sick, or otherwise absent, should be identified as such.
13	The second phase of the Children's Services National Minimum Data Set (CSNMDS) scope on 'workers' include all paid, unpaid (volunteers) and contract workers delivering child care and preschool services.
14	Additional data elements on workers be tested in the second phase of the CSNMDS.
Specific items—service-related	
15	For a full, objective electronic matching of services between data sets to take place, some steps need to be taken in regards to data items on the Department of Families and Community Services (FaCS) and state and territory administrative databases. Given that the final CSNMDS collection will not be in place for a few more years, database administrators have time to make any alterations necessary to allow the service-matching process required.
16	For family day care caregivers/in-home caregivers, put the relevant guiding information alongside the question in the collection form.
19	Change the wording of the question for caregivers to: 'How many children are you registered with your scheme as being able to care for?'
21	Give mobile services the option of recording the number of weeks in the year in which they offer each session.
23	Give mobile services the option of recording a two-weekly schedule.
25	Provide an alternative wording for caregivers: 'What times are you registered with your coordinating unit as being available?'

(continued)

Table 3 (continued): Phase 1 pilot test recommendations agreed by the Children's Services Data Working Group

No.	Recommendation
Specific items—child-related	
27	Where service providers do not know the exact eight-digit date of birth of a child, the estimation of the child's date of birth to the nearest three months and year will provide more accurate information.
28	Service providers should be requested to include the Australian Bureau of Statistics standard Indigenous status question on enrolment forms and they should receive assistance on how to ask the question.
29	Most jurisdictions will require changes to their systems and data-recording practices to obtain accurate and comparable information on Indigenous status.
30	To clearly identify the purpose for which information on the arrival and departure times of children who attend during the collection week is obtained.
Specific items—worker-related	
31	For consistency purposes for child care and preschool qualifications, jurisdictions should develop a common list of relevant qualifications. The categories of worker qualifications need to be revised in line with current practice.
32	The CSNMDS data manual currently includes a data item for workers that is a 'yes' or 'no' indicator of whether a worker has worked in the children's services sector for more than three years. It is recommended that the data item be made a more general question asking for the number of years of experience in the children's services field.
Additional data elements	
33	The next phase of development of the CSNMDS should include more data items on services, children and workers.

3.4 Phase 2 pilot test

The phase 2 pilot test was undertaken in September 2004. The main purpose of this test was to examine the now much-expanded set of 44 data items in the revised draft CSNMDS specifications. A secondary aim was to test the data items that could be used to create a statistical linkage key. Box 2 shows the main findings of the phase 2 pilot test.

Box 2: Main findings of the phase 2 pilot test

The scope of the proposed Children's Services National Minimum Data Set (CSNMDS) is practical and comprehensive in its coverage of child care and preschool services in Australia.

The collection instruments, such as the data set specifications and paper forms, were both clear and appropriate, with only minor changes required.

Efficiency gains could be made if an electronic data system was employed.

Data elements which can be used to construct a statistical linkage key for children (date of birth, sex and selected letters of name) were collected successfully. However, as this was a one-off collection, with a relatively small sample size, it was not possible to demonstrate how the statistical linkage key could be used to track children's usage of children's services.

The core information needs and rights of all potential stakeholders were given extensive consideration throughout the development phase of the CSNMDS. In addition, a workable balance of information needs and stakeholder rights was successfully achieved.

A total of 32 recommendations were made to the CSDWG encompassing three broad areas of the data collection, scope of the CSNMDS, collection instruments and balancing core needs and rights of stakeholders. Of the 32 recommendations, only five were either rejected or endorsed with qualification, with the remaining 28 endorsed without change. Appendix D lists the recommendations from the second phase pilot test and the associated responses by the CSDWG. Table 4 below lists those recommendations that were endorsed by the CSDWG.

Table 4: Phase 2 pilot test recommendations agreed by the Children's Services Working Group

No.	Recommendation
	Scope of the Children's Services National Minimum Data Set (CSNMDS)
1	Broaden the scope of the CSNMDS to include all child care and/or preschool service activities (apart from those activities that require the attendance of a parent/ guardian) offered at government-funded services.
2	CSDWG review and document the services that would be excluded from the CSNMDS under the current scope to determine whether this is appropriate—outcome of licensed services to be included.
3	Before implementation, establish a register of all services that fall within the scope of the collection in cooperation with Australian, state and territory government departments.
4	Exclude general staff from the collection, so that the only workers included in the scope of the CSNMDS are those, both paid and unpaid, who have some direct contact with children. Outcome included inclusion of administrative staff.
5	Narrow the scope for workers in the CSNMDS to exclude workers absent from the service during the collection week.
6	Consult with the Department of Families and Community Services regularly about changes to special programs which engage workers in children's services.
7	Amend the *Preschool service provided for child* data element to include children who usually receive preschool in the data collection week.
	Collection instruments
8	Family day care/in-home care services should be given the option of providing all caregiver information themselves.
9	The CSDWG reconsider the value of retaining the service fee data item in the collection. They agreed to retain and redevelop the item.
10	The Australian Institute of Health and Welfare (AIHW) to develop clearer guidelines on a data item regarding places offered and include these in the Final CSNMDS specifications.
11	Extend the guidelines for *Employment status—permanent/fixed-term contract/casual* data element in the CSNMDS specifications to state: 'If the service is unsure on the status of its staff, use the leave entitlements that the staff member is eligible for as a guide to the category to include them in.'
12	The CSDWG provide guidance as to the appropriate category for caregivers who are self-employed in the *Employment status—permanent/fixed-term contract/casual* data element. Agreed to retain as is.
13	The worker data element, *Employment status—full-time/part-time*, be omitted from the CSNMDS.
14	The worker data element *Employment status—relief worker* be omitted from the CSNMDS. Endorsed, but with the addition of a new item, 'type of employer' to be developed with advice from the Australian Bureau of Statistics.
15	The CSDWG consider adding Associate Diploma to the data domains of the *Paid contact worker/caregiver — qualification level* data element. Agreed to investigate further.
16	Modify *Child—letters of name* data element so that letters of the first name of the child are collected first, followed by the letters of the surname.
17	The CSDWG develop a better definition of a preschool service for the final data set specifications of the CSNMDS.

(continued)

Table 4 (continued): Phase 2 pilot test recommendations agreed by the Children's Services Data Working Group

No.	Recommendation
Collection instruments	
18	Add a sentence to the *Child—school status* data element in the final data set specifications that states; 'If the child attends preschool in a school setting, they should not be counted as attending school'.
19	Change the language question to 'Does the child (or their parents or guardian) speak a language other than English at home?' and change the fields to
	Not applicable, English only spoken at home
	Other language, please specify.
20	Before implementation of the CSNMDS, children's services should be encouraged to record language spoken to match the definition and guidelines of the *Child—main language other than English spoken at home* data element.
21	The AIHW consult with the Functioning and Disability Unit of the AIHW to improve the guidelines for the *Child— disability status—need for assistance* data element in the final data set specifications. Children should only be included if their parent/guardian has identified or confirmed that their child has a need for additional assistance compared to children of a similar age and related to a long-term health condition or disability. More appropriate examples should be provided for the categories listed.
22	Family day care/in-home care services that use electronic data collection systems should modify their systems to collect actual hours attended by children.
24	Develop electronic-based collection for the CSNMDS. This system would be extensively field-tested before implementation and introduced as widely as possible to allow data collection on all agreed CSNMDS data items.
25	The CSDWG make a final decision about the set of data items to collect in the CSNMDS.
Balancing core needs and rights of stakeholders	
26	Before the implementation of the CSNMDS, provide support to children's services and jurisdictions to change over to collecting the CSNMDS data items.
27	Retain *Paid contact worker/caregiver—length of experience* and the CSDWG decide the appropriate collection method.
	Guidelines on how to estimate years of experience should be improved and children's services should be encouraged to collect this item accurately.
30	Omit *Paid contact worker/caregiver—date of birth* and replace it with *Paid contact worker/caregiver—age group*.
31	Before implementation of the CSNMDS, children's services should be encouraged to collect Indigenous status of workers and children at point of entry to their services and be provided with appropriate guidance to achieve this.
32	Before implementation of the CSNMDS, children's services should be encouraged to begin collecting *Paid contact worker/caregiver—qualification field* and *Paid contact worker/caregiver—qualification level* at point of entry to their services.

As a consequence of the pilot testing, 30 data items were retained unchanged, 12 were retained with changes and 2 items were deleted. Table 5 provides details of the items retained, changed and deleted (AIHW 2006b).

Table 5: Children's Services National Minimum Data Set (CSNMDS) data items tested in the phase 2 pilot test and outcome of testing

Data item	Retain unchanged	Retain with changes	Omit
Service items:			
Service identifier (ID)	✓		
Service address	✓		
Weeks of operation—per year	✓		
Days of operation—per week	✓		
Start time	✓		
Finish time	✓		
Service delivery mode	✓		
Service delivery setting	✓		
Management type	✓		
Legal entity	✓		
Main service activity type	✓		
Other service activities	✓		
Fee schedules		✓	
Licensed places	✓		
Places offered		✓	
Worker/caregiver items:			
Worker identifier (ID)	✓		
Date of birth		✓	
Sex	✓		
Indigenous status	✓		
Total hours worked	✓		
Paid / unpaid	✓		
Type of work performed	✓		
Specific role	✓		
Employment status (full-time/part-time)			✓
Employment status (permanent/fixed-term contract/ casual)		✓	
Employment status (relief worker)			✓
Qualification field	✓		
Qualification level		✓	
Educational enrolment status		✓	
Length of experience		✓	
Length of time with current service		✓	
Child items:			
Letters of name		✓	

(continued)

Table 5 (continued): Children's Services National Minimum Data Set (CSNMDS) data items tested in the phase 2 pilot test and outcome of testing

Date of birth	✓		
Sex	✓		

Data item	Retain unchanged	Retain with changes	Omit
Indigenous status	✓		
School child status		✓	
Main language other than English spoken at home	✓		
Disability status		✓	
Arrival times at service	✓		
Service departure times	✓		
Preschool service provided to this child		✓	
Family type	✓		
Sex of parent(s)/guardian(s)	✓		
Working arrangements of parent(s)/guardian(s)	✓		

3.5 Sign-off

On 2 June 2005, the CSDWG endorsed the final Children's Services National Minimum Data Set specifications. These included the changes identified in the second pilot test.

The data set specifications were subsequently endorsed by the National Community Services Information Management Group (NCSIMG) on 15 July 2005. This endorsement was subject to the incorporation of minor amendments proposed by the National Community Services Data Committee. The NCSIMG also:

- agreed the CSNMDS specifications be published as an NSCIMG publication
- asked the CSDWG to prepare a succinct business statement to be used as a basis for the NCSIMG Chair to lead a CDSMAC teleconference to gain an indication of the level of support for implementation.

Subsequent to the CSDWG endorsement of the final specifications, the Queensland representative of the National Disability Administrators raised several issues regarding the data item *Child with a disability – need for assistance*. As a result, a number of alterations were made to the text of this data specification, including to the name (it is now *Child with a disability or long-term condition – need for assistance*).

A copy of the final data set specifications is provided at Appendix F.

Endorsement of the final CSNMDS specifications by the NCSIMG meant that the CSDWG had completed its task of developing a national minimum data set for children's services. It also represented an important first step towards addressing the information-related issues raised by the Senate Inquiry on Child Care Funding and the National Agenda for Early Childhood.

In August 2006, CDSMAC indicated its commitment to the ongoing development of the CSNMDS by agreeing to fund a proposal to undertake a cost–benefit analysis of implementing the CSNMDS.

The next step is the development of an implementation plan and ultimately the inclusion of items in national and state/territory data collections. Any future work for the CSDWG, or another body yet to be determined, will be determined by the NCSIMG in the context of implementing the CSNMDS.