

2. Structure

2.1 Format of the Data Dictionary

The presentation of data element definitions in the HACC Data Dictionary is primarily based on the international standards for defining data elements issued by the International Organisation for Standardisation and the International Electrotechnical Commission, ISO/IEC Standard 11179 *Specification and Standardisation of Data Elements*. The *National Community Services Data Dictionary Version 1.0* (1998), *National Health Data Dictionary Version 6.0* (1997), and the *Community Nursing Minimum Data Set Version 2.0* (1998) are also based on the ISO/IEC Standard 11179. The application of this international standard across data dictionaries and data collections in the health and community services fields adds to the completeness, integrity and consistency of data definitions and consequently to the quality and utility of national data definitions.

Collectively, the format describes a set of attributes for data definitions that comprise a set of “metadata” standards applicable to each data definition. Metadata may be defined as data describing the identifying, definitional, relational and representational attributes of data definitions (Australian Institute of Health and Welfare, *National Community Services Data Dictionary Version 1.0*, 1998, p.A-3).

The ISO/IEC 11179 is a six part standard consisting of:

- Part 1 Framework for the specification and standardisation of data elements
- Part 2 Classification of concepts for the identification of domains
- Part 3 Basic attributes of data elements
- Part 4 Rules and guidelines for the formulation of data definitions
- Part 5 Naming and identification principles for data elements
- Part 6 Registration of data elements

The format used in the HACC Data Dictionary Version 1.0 (and in the other data dictionaries mentioned above) is based largely on Part 3 of the standard. Definitions for each of the data element attributes used in the HACC Data Dictionary Version 1.0 are provided at Appendix D.

Specific mention should be made of some enhancements to the standard set of data element attributes, which have been developed specifically for the HACC Data Dictionary Version 1.0. Two additional data element attributes have been included:

Reporting status

This field indicates the functional status of the data element in relation to the reporting requirements of the HACC MDS collection. This data element attribute distinguishes between *supporting data requirements*, *reporting data requirements*, and *supporting and reporting data requirements* (see Section 2.1.1 for further comment on the distinction between supporting and reporting data elements).

Reporting requirements

This field details how the data element should be reported within the HACC MDS collection (as opposed to the actual capture of the data which is covered under *collection methods*). *Reporting requirements* includes, for example, instructions about which record for the data element should be reported when more than one record may exist in a database and not all records are required (eg the most recent record of Carer Availability for the client).

2.1.1 Supporting and reporting data requirements

The HACC Data Dictionary Version 1.0 contains all of the data elements that are required to be reported in the HACC MDS collection. It also contains specifications for those data elements that need to be recorded on the information systems of HACC agencies in order to support the reporting requirements of other data elements. That is, the HACC Data Dictionary contains the specifications for both *supporting* and *reporting* data requirements. (see Table 2.1).

Data elements which are *supporting data requirements only* are those that do not need to be reported directly as part of the HACC MDS collection, but which the agency needs to record to enable the reporting of other data elements. For example, a client's Family Name/Surname and First Given Name are not reported within the HACC MDS collection, but they are required to enable the agency to report Letters of Name. Similarly, the data elements which relate to individual service events (such as date, primary type, amount, etc) are not reported within the HACC MDS collection but are essential to calculating the total amount of assistance received by a person over the reporting period.

Data elements which are *reporting data requirements only* are those which are derived from other data elements for reporting purposes. For example, Letters of Name is not directly collected by the agency but is derived for reporting purposes from Family Name/Surname and First Given Name. Similarly, the data elements which relate to the total amount of assistance received by the person during a reporting period are not recorded directly, but are derived for reporting purposes from those data elements that relate to individual service events.

Data elements which are *supporting and reporting data requirements* are those which the agency needs to both record on an ongoing basis and report as part of the HACC MDS collection. The same codes are used for recording and reporting this data and the specifications for recording and reporting these data elements are either identical or very similar.

Supporting and reporting data requirements relate to client characteristics, client circumstances and service episodes. Data about client characteristics (eg date of birth, sex, country of birth) are basically stable over time and are simply reported by the agency just as they have been recorded. However, data about client circumstances (eg living arrangements, carer availability, area of residence) and service episodes (eg dates of entry and exit, source of referral, main reason for cessation) can change over time and across service episodes. An agency may, therefore, have different values for these types of data elements recorded on their information system for the same client during the reporting period.

Table 2.1: Data elements by reporting status

	Supporting data requirement	Reporting data requirement
Person role	Reason for HACC client status Family name/surname First given name	Reason for HACC client status Letters of name
Person characteristic	Date of birth Sex Country of birth Main language spoken at home Indigenous status Living arrangements Accommodation setting Government pension/benefit	Date of birth Sex Country of birth Main language spoken at home Indigenous status Living arrangements Accommodation setting Government pension/benefit
Location	Area of residence Suburb/town/locality name Postcode Service delivery setting	Area of residence Suburb/town/locality name Postcode
Environment	Carer availability Carer residency status Relationship of carer to care recipient	Carer availability Carer residency status Relationship of carer to care recipient
Event	Source of referral Date of entry into HACC service episode Date of receipt of assistance Primary type of assistance received Funding source category Amount of assistance received (time) Amount of assistance received (quantity) Amount of assistance received (cost) Assistance with goods and equipment received Date of exit from HACC service episode Main reason for cessation of services Accommodation setting after cessation of services	Source of referral Date of entry into HACC service episode Date of last assessment Date of exit from HACC service episode Main reason for cessation of services Accommodation setting after cessation of services
Outcome		Total amount of type of assistance received (time) Total amount of type of assistance received (quantity) Total amount of type of assistance received (cost) Total assistance with goods and equipment received

Note: Data element concepts are not included in this listing as they are neither supporting nor reporting data requirements.

The changeability of circumstance and episode data has necessitated greater specificity in these data elements about *when* they should be collected by the agency and *which* of potentially multiple records should be reported in the HACC MDS. For example, the agency should record the client’s area of residence at the beginning of each service episode and should update this information during subsequent assessments/reassessments where necessary. At the end of the reporting period, the agency should report the most recent available record of area of residence for the client.

2.1.2 Datatypes: elements, concepts and derived

Part of the format used to describe data elements in Version 1.0 of the HACC Data Dictionary differentiates between different types of data elements. This is specified under the data element attribute ‘Datatype’ (see Appendix D).

There are three distinct datatypes which describe the elements included within the HACC Data Dictionary. These are *data element concepts*, *data elements* and *derived data elements*. The HACC Data Dictionary contains a total of 6 data element concepts, 30 data elements, and 6 derived data elements (see Box 2.1).

Box 2.1: Data elements by datatype (alphabetical).

Data element concepts	
Carer	HACC service episode
HACC agency	HACC service event
HACC client	Record linkage
Data elements (supporting and reporting data requirements)	
Accommodation setting	Indigenous status
Accommodation setting after cessation of services	Living arrangements
Area of residence	Main language spoken at home
Carer availability	Main reason for cessation of services
Carer residency status	Postcode
Country of birth	Reason for HACC client status
Date of birth	Relationship of carer to care recipient
Date of entry into HACC service episode	Sex
Date of exit from HACC service episode	Source of referral
Government pension/benefit status	Suburb/town/locality name
Data elements (supporting data requirements)	
Amount of assistance received (cost)	Family name/surname
Amount of assistance received (quantity)	First given name
Amount of assistance received (time)	Funding source
Assistance with goods and equipment received	Primary type of assistance received
Date of receipt of assistance	Service delivery setting
Derived data elements (reporting data requirements)	
Date of last assessment/review	Total amount of type of assistance received (quantity)
Letters of name	Total amount of type of assistance received (time)
Total amount of type of assistance received (cost)	Total assistance with goods and equipment received

Data element concepts are included to clarify the concepts underpinning related data elements within the Data Dictionary. These are neither supporting nor reporting requirements in themselves, but define the higher level concepts that many of the individual data elements describe. Dictionary entries for data element concepts are presented in a more limited format than other data elements.

Data elements included within the Data Dictionary specify particular pieces of information which need to be collected by HACC agencies and in some cases need to be reported as part of the HACC MDS collection. Of the 30 data elements included within the Data Dictionary, 20 are *supporting and reporting data requirements* and 10 are *supporting data requirements* only.

Derived data elements are data which are not collected directly but which are calculated or derived from other information specified for collection by HACC agencies in order to meet HACC MDS reporting requirements. The 6 derived data elements included within the HACC Data Dictionary are *reporting data requirements* only.

2.2 Organisation of the Data Dictionary

An information model provides a framework for the organisation of information and the development of data, as well as the design of new information systems. To date, an information model that is specific to the HACC program has not been developed. Future developments in the HACC MDS may use information modelling techniques to assist with clarifying the program's data requirements in areas not yet covered by the HACC MDS. This may result in a HACC program specific information model that can be used as a basis of future versions of the HACC Data Dictionary.

In the absence of a HACC information model, the *National Community Services Information Model Version 1.0* was used as the basic organising principle for the HACC Data Dictionary Version 1.0. Although, in some ways, a HACC model would provide a more specific and relevant reference tool for the HACC MDS, the use of the *National Community Services Information Model Version 1.0* assists with ensuring compatibility between future developments in the HACC MDS and the processes and outcomes of future developments in the *National Community Services Information Model Version 1.0* (1998). This is consistent with the objective of the HACC MDS of facilitating consistency and comparability between HACC data and other aged, community care and health data collections.

Although the organisation one usually associates with a dictionary is alphabetical, the data definitions contained in Chapter 3 are organised according to the entity or segment of the *National Community Services Information Model Version 1.0* to which they relate. This organisational method is also used in the *National Community Services Data Dictionary Version 1.0* and will be that used in the next version of the *National Health Data Dictionary* (using the National Health Information Model) due for release in 1998. For easy reference an alphabetic listing of the data elements and data element concepts has also been included in the introductory pages to this dictionary.

2.2.1 The National Community Services Information Model V.1.0

The National Community Services Information Model Version 1.0 was developed by the Australian Institute of Health and Welfare during 1997, in consultation with the National Community Service Information Model Working Group. The Working Group comprised a

subset of the National Community Services Data Committee (NCSDC). The NCSDC is, in turn, a subcommittee of the National Community Services Information Management Group (NCSIMG). Membership of the NCSIMG includes representatives of all signatories to the National Community Services Information Agreement, including Commonwealth, State and Territory government departments responsible for community services, the Australian Bureau of Statistics and the Australian Institute of Health and Welfare.

The NCSDC was established primarily to develop and maintain the *National Community Services Data Dictionary* and relevant minimum data sets in all areas of community services. The NCSDC has a coordinating role to ensure national consistency of data definitions and standards in quality control. The development of the National Community Service Information Model was seen by the NCSDC as the first step in improving the quality and consistency of national community services information.

The *National Community Services Information Model (NCSIM) Version 1.0* is reproduced at the end of this chapter. The data element definitions in Chapter 3 are grouped according to the entity to which they relate. An excerpt from the model that illustrates the entity and sub-entities of the model and related data elements is provided at the beginning of each entity-based grouping of data elements.

Each of the data element definitions in Chapter 3 includes a reference or ID number that links the data element to the segment (or entity) of the model to which it relates.

For example, the data element Living Arrangements has the reference number 3.1.5-1. The components of this reference number locate the data element within the model in the following ways:

- 3 indicates that the data element is located within the Party Characteristics entity
- 3.1 indicates that the data element is located within the Person Characteristic sub-entity within Party Characteristic
- 3.1.5 indicates that the data element is located within the Accommodation/Living Characteristic sub-entity within Person Characteristic
- 3.1.5-1 uniquely identifies this data element within the data dictionary.

PARTY

PERSON

AGENCY

PARTY GROUP

FAMILY

HOUSEHOLD

TARGET GROUP

OTHER PARTY GROUP

National Community Services Information Model
Version 1.0
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LOCATION

ADDRESS

SETTING

SERVICE DELIVERY SETTING

OTHER SETTING

NEED

PERSON PARTICIPATION / INDEPENDENCE

Party characteristics

PERSON CHARACTERISTIC

DEMOGRAPHIC CHARACTERISTIC

SOCIO-CULTURAL CHARACTERISTIC

EDUCATIONAL CHARACTERISTIC

LABOUR CHARACTERISTIC

ACCOMMODATION / LIVING CHARACTERISTIC

INCOME CHARACTERISTIC

LEGAL CHARACTERISTIC

IMPAIRMENT CHARACTERISTIC

DISABILITY CHARACTERISTIC

FUNCTIONAL CHARACTERISTIC

OTHER PERSON CHARACTERISTIC

PARTY GROUP CHARACTERISTIC

FAMILY CHARACTERISTIC

FAMILY INCOME CHARACTERISTIC

OTHER FAMILY CHARACTERISTIC

HOUSEHOLD CHARACTERISTIC

HOUSEHOLD INCOME CHARACTERISTIC

OTHER HOUSEHOLD CHARACTERISTIC

AGENCY CHARACTERISTIC

STATE OF WELLBEING

PERSON VIEW

EVENT

PERSON EVENT

BIRTH EVENT

LIFE EVENT

DEATH EVENT

ENVIRONMENTAL EVENT

ENVIRONMENTAL MODIFICATION EVENT

ECONOMIC TRANSACTION EVENT

EXPENDITURE

TRANSFERS/SUBSIDY

REVENUE/RECEIPT

COMMUNITY / FAMILY EVENT

INFORMAL CARER ASSISTANCE EVENT

INFORMAL CARE EVENT

HEALTH AND WELFARE SERVICE EVENT

REFERRAL EVENT

ASSESSMENT OF ELIGIBILITY FOR SERVICE EVENT

ENTRY INTO SERVICE EVENT

ASSESSMENT EVENT

SERVICE PROVISION EVENT

CASE MANAGEMENT EVENT

LEAVE FROM SERVICE EVENT

EXIT / DISCHARGE FROM SERVICE EVENT

DETERMINATION OF LEGAL STATUS EVENT

OTHER HEALTH AND WELFARE SERVICE EVENT

OTHER EVENT

ENVIRONMENT

TOOLS AND EQUIPMENT

PERSONAL SUPPORT

SOCIAL AND CULTURAL ENVIRONMENT

ECONOMIC AND POLITICAL ENVIRONMENT

HUMAN-MADE PHYSICAL ENVIRONMENT

NATURAL ENVIRONMENT

Enabling factors

RESOURCE

KNOWLEDGE FACTOR

AVAILABILITY FACTOR

ACCESSIBILITY FACTOR

PARTY ROLE

PERSON ROLE

CITIZEN ROLE

FAMILY RELATIONSHIP ROLE

CARER ROLE

RECIPIENT ROLE

SERVICE PROVIDER ROLE (Person)

AGENCY ROLE

SERVICE PROVIDER ROLE (Agency)

SERVICE FUNDER ROLE

SERVICE PURCHASER ROLE

OTHER ROLE

OUTCOME

HEALTH AND WELFARE PROGRAM

SERVICE

FEE STRUCTURE

ACTIVITY