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Non-government sector Mental Health Data Dictionary and Standard Data Set

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Abstract

In order to provide a framework for standardised data reporting in the Australian non-government community mental health sector, a Data Dictionary and standard data set were developed. Advisory Committee and key stakeholder consultation, review of local and national minimum data sets and stakeholder validation informed this process. This resulted in a Data Dictionary containing 37 items and a standard data set containing 15 items. These items conform to the Australian Institute of Health & Welfare's ([AIHW](#)) standards and address [Leginski et al.'s](#) (1989) decision standards.

Key words: Data Dictionary; information; non-government; standard data set

Introduction

This paper reports the second stage of a three-part project. The Non-Government Mental Health Services Information Project (NMHSIP) is a joint national project between the Western Australian Centre for Mental Health Services Research (CMHSR) and the Victorian Department of Human Services. The aims of the reported stages were:

1. To develop a Data Dictionary for the non-government support sector; and
2. To derive a standard data set (SDS) constituting the preliminary reporting requirements for the non-government sector.

The SDS is a minimum data set (MDS) prior to endorsement by the relevant national bodies. A minimum data set is a collection of data items, drawn from the Data Dictionary, that are identified as essential to the description and analysis of service delivery based on the information requirements of key stakeholders ([AIHW 2000](#)). These data items are defined entities that may be a data element, a data element concept, a derived data element or a composite data element. A National Minimum Data Set (NMDS) is contingent upon a national agreement to collect data according to national standards and to supply that data as part of the national collection ([AIHW 2000](#)).

A well-constructed information system to provide purchasers, managers and providers of mental health services with management intelligence is essential for effective planning, resourcing, management and delivery of services to clients. Such a system was non-existent in Australian non-government community mental health sectors.

The lack of information about clients, the services provided and costs

and outcomes is currently one of the greatest obstacles to the effective planning, delivery and improvement of mental health services ([Commonwealth of Australia 1996](#); [Department of Health and Aged Care 1999](#)). This is especially the case for the non-government sector, where aggregate information is collected, outputs are not standardized within and between states, and there is no electronic information system to serve as a 'decision support system'.

The parameters of the Data Dictionary should be defined by the information needs of key stakeholders and what data should be collected ([Morris-Yates & Andrews 1997](#)). The key stakeholders are service planners and purchasers, service providers, consumers and carers. Ultimately, people with a mental health issue and their carers are the principal stakeholders of data development ([Morris-Yates & Andrews 1997](#)). The intended function of the information system should be well defined and the intended audience well considered in order to maximize the utility and resulting impact of information system-generated reports ([Bybee et al. 1995](#)).

It is in the interests of all stakeholders that service delivery be based on best practice and continuous quality improvement. In particular, consumers and carers require transparency regarding the processes through which they access services, service equity, the quality of the care provided and the continuity of care ([Morris-Yates & Andrews 1997](#)). *Consumers and carers* are most concerned perhaps about the confidentiality of any personally identifiable information.

Service providers need to have access to a core set of information for the monitoring of consumer progress and the formulation of an individual care plan ([Department of Health and Aged Care 1999](#)). Information on 'who receives what' is of particular interest to non-government service providers. The context in which a non-government organisation (NGO) operates in the sector is also critical for avoiding service duplication.

Planners and purchasers require the most substantial information in order to manage resources, determine priorities, monitor workflows, conduct clinical audits, monitor the overall efficiency and effectiveness of the service, and monitor the achievements set by government. The information priorities are population health needs and the services being delivered ([Stevens & Raferty 1992](#)), the staff and facilities required in delivering a service, the associated costs, and the service outcomes ([Andrews, Wilton & Wilkins 1992](#)).

Type of data to be collected

Leginski et al.'s Information Framework

As part of the data development projects specified in the National Mental Health Strategy, it was agreed that NMDs should address five data content standards summarized succinctly in [Leginski et al.'s](#) (1989) framework as "who receives, what services, from whom, at what cost and with what effect". The framework is an approach to data development that is consistently adopted in the information development literature ([Department of Health and Aged Care 1999](#)).

Derived from the United States' Mental Health Statistics Improvement Program ([Leginski et al. 1989](#)), the framework provides a "good starting point for capturing essential client and service information on a routine basis" (Commonwealth Department of Health and Family Services 1997, p.4).

Who receives refers to the clients, either consumers or carers, who are recipients of the services. *What services* are those that are provided either directly to, or on behalf of, a client. These services may be tangible (eg, two hours respite) or intangible (eg, community development). *From whom* refers to those providing the services in the non-government sector. *At what cost* refers to the quantity of resources used in the provision of services, including human and capital resources. *With what effect* refers to the outcomes attributable to the service provided ([Morris-Yates & Andrews 1997](#)).

[Leginski et al.](#) (1989) recommended that data items should be assessed for candidacy through the convergence of need, tradition, professional judgment and empiricism. *Need* simply relates to those data items critical to the processing and categorization of data, such as 'establishment identifier' and 'client identifier'. *Tradition* was also a factor contributing to the development of the Data Dictionary and SDS, with respect to the idiosyncrasies of the non-government sector. *Professional judgement* refers to the selection of data items based on informed experience and knowledge that address the information requirements of key stakeholders.

National and international information standards

The Data Dictionary and MDS should conform to existing national and international standards. The standardisation of data item specification is promoted by the International Organization for Standardization and the International Electrotechnical Commission's (ISO/IEC) Standard 11179 *Specification and Standardization of Data Elements*, which is the international standard for defining data items issued by ISO/IEC ([Australian Institute of Health and Welfare 2000](#)). This standard is designed to ensure that each definition is clear, concise, comprehensive and provides sufficient information to ensure that all those who collect, provide, analyse and use the data understand its meaning.

The existence of National Information Models ensures that dictionary development is not driven by individual data collections and their associated data development activities ([Australian Institute of Health and Welfare 2000](#)). There are currently two National Information Models that represent Leginski's framework in a more comprehensive and process-oriented model. The National Health Information Model (NHIM) and the National Community Services Information Model (NCSIM) are structured representations of [Leginski et al.'s](#) (1989) framework, with additional components such as environment factors, business factors, and need or issue factors, to name a few.

The National Information Models correspond with the National Health Data Dictionary (NHDD) and the National Community Services Data Dictionary (NCSDD), respectively. Both Data Dictionaries and Information Models were designed to improve the comparability of health and community services data nationally and inter-sectorally. They promote uniformity, availability, reliability, validity, consistency and completeness in the data. They also ensure that data are collected uniformly from all services and jurisdictions throughout Australia, thereby improving the quality of information for community discussion and public policy debate on health issues.

Method

In order to develop a Data Dictionary for the non-government community support sector, it was essential that the main information requirements of key stakeholders were considered in terms of

[Leginski et al.'s](#) (1989) framework. Following initial consultation with key stakeholders and the Advisory Committee, it was recommended also that any Data Dictionary development should conform to existing national standards. In order to satisfy national information standards, the ISO/IEC's Specification and Standardization of Data Elements was adhered to and the NCSIM and NHIM reviewed and merged. Although the NHIM is less applicable to the non-government sector because it collects institutional in-patient data, it was more developed than the NCISM, and hence their combination.

The merged information model was mapped subsequently to [Leginski et al.'s](#) (1989) framework, providing a context for data item development. Where a data item was selected from another MDS and did not apply to the non-government mental health support sector, it was modified accordingly. Data items considered to be relevant to the non-government mental health support services MDS that were not contained in the above data dictionaries or MDSs were constructed within the context of [Leginski et al.'s](#) (1989) framework.

The Advisory Committee, comprising the executive directors of non-government organisations (NGO) covering a broad range of non-government services and Health Department contract managers, was again consulted along with a sample of NGOs and key informants using a snowball sampling technique. Although a formal needs assessment of information was not within the scope of this project, consultation with government planners, purchasers and service providers did inform the development of the Data Dictionary.

A review of the data items associated with each of the relevant mapped data areas was undertaken, using the following national and local data dictionaries and MDSs. Each data item was assessed for relevance to the non-government sector:

- NMDS – Admitted Patient Mental Health Care
- NMDS – Community Mental Health Care (patient level)
- NMDS – Community Mental Health Establishments
- National Health Data Dictionary (NHDD)
- National Community Services Data Dictionary (NCSDD)
- Home and Community Care (HACC) Data Dictionary
- HACC MDS
- Western Australian Disability Services Commission's Annual Client and Service Data Collection (ACDC)
- State Government service specifications and individual contracts
- Ruah's Paradox system
- Psychiatric Record Information System Management (PRISM)
- Local Area Mental Health Information System (LAMHIS)
- National Information Management System (NIMS)

Selecting data items for the Data Dictionary and the SDS

Data items were selected, based on need and professional judgement and in terms of their relevance in addressing [Leginski et al.'s](#) (1989) framework, their applicability to the non-government mental health support sector and their contribution to the information requirements of key stakeholders. Extensive consultation with key stakeholders meant professional judgement was the main contributor to the Data Dictionary.

The proposed Data Dictionary was validated during a one-day workshop with the Victorian Department of Human Services and four representatives from the Psychiatric Disability Support Service

(PDSS). Each data item was considered as part of a block according to its alignment with [Leginski et al.'s](#) (1989) framework and the National Information models. The *Preliminary Validated Data Dictionary* then underwent a post-validation review by the workshop participants and further suggestions were forwarded to the researchers.

The SDS, or preliminary reporting tool for the non-government sector, also emerged from the convergence of need, tradition and professional judgement. Following the post-validation review of the Data Dictionary, core data items were selected from this to comprise the SDS. While a consideration of key stakeholder information needs was essential to the selection of data items for the SDS, the professional judgement of key informants was the foremost contributor to the SDS. SDS data items were selected according to their relevance to the non-government sector and their contribution to the information requirements of key stakeholders. The SDS was then validated during the one-day workshop with the Department of Human Services and a sample of PDSS providers.

Results

Several data items appeared consistently in the reviewed MDSs, testimony to their applicability across sectors. Although the National Health and Community Services Information Models were similar, there were substantial differences in the types of data items contained in the NCSDD and the NHDD. The NMDSSs Community Mental Health Care and Community Mental Health Establishments provided the closest representations of the non-government mental health support sector of all NMDSSs.

The proposed Data Dictionary

The newly developed Non-Government Mental Health Services Data Dictionary contains 35 data elements and two data element concepts, a total of 37 data items. The dictionary serves as a menu for the selection of items for the SDS. The data items of the proposed Data Dictionary are depicted in Table 1, in the context of [Leginski et al.'s](#) (1989) framework and the national information models.

The 'service group' data element, which indicated the type of service provided, is the only item contained in the Data Dictionary that is not contained in any of the data dictionaries or MDSs reviewed, as it is specific to the types of services provided by the non-government sector. It represents the translation of the classification into a tool for reporting and is the most fundamental component of the service event concept, or *what services* are provided.

The other data items are all adaptations of data items that exist in the reviewed data dictionaries and MDSs. The definitions, data domains, context and guides for use were modified to reflect the situation in the non-government sector as detailed by the classification of the types of services provided. In most cases, the data type, representational form, field size and representational layout were unchanged.

The Preliminary Validated Data Dictionary

The Preliminary Validated Data Dictionary - Non-government Mental Health Services contained 36 data items: 34 data elements and two data element concepts. The data items were weighted towards addressing *who receives what services*, with 15 and 12 items for each question, respectively. Seven data items addressed *from whom*, one *at what cost* and one *with what effect*.

1: The 37 data items proposed for the *Data Dictionary – Non-government Mental Health Services* in the context of Leginski et al's (1989) framework and the National Information Models.

<u>Leginski</u>	<u>NHIM</u>	<u>NCSIM</u>	<u>Data items</u>
Who receives (Service delivery - assessment)	Party characteristics - Person characteristic - Demographic characteristic	Party characteristics - Person characteristic - Demographic characteristic	<ul style="list-style-type: none"> ● Date of birth ● Country of birth ● Sex ● Indigenous status ● Period of residence in Australia
	Party characteristics - Person characteristic - Social characteristic	Party characteristics - Person characteristic - Socio-cultural characteristic	<ul style="list-style-type: none"> ● Preferred language ● Need for interpreter service
	Party characteristics - Person characteristic - Labour characteristic	Party characteristics - Person characteristic - Labour characteristic	<ul style="list-style-type: none"> ● Principal source of income
	Party characteristics - Person characteristic - Accommodation characteristic	Party characteristics - Person characteristic - Accommodation/living characteristic	<ul style="list-style-type: none"> ● Area of usual residence ● Type of usual accommodation
	Party characteristics - State of health and wellbeing - Health status - Mental wellbeing	Party characteristics - Person characteristic - Impairment characteristic	<ul style="list-style-type: none"> ● Principal diagnosis ● Additional disability
	Party characteristics - Person characteristic - Other person characteristic	Party characteristics - Person characteristic - Other person characteristic	<ul style="list-style-type: none"> ● Client type
What services (Service delivery - implementation)	Event - Health and welfare service event - General	Event - Health and welfare service event - General	<ul style="list-style-type: none"> ● Service event ● Service episode ● Service event participation ● Level of planning
	Event - Health and welfare service event - Service provision event	Event - Health and welfare service event - Service provision event	<ul style="list-style-type: none"> ● Service Group ● Amount of assistance received (time)
	Event - Health and welfare service event - Request for entry into service event	Event - Health and welfare service event - Entry into service event	<ul style="list-style-type: none"> ● Date of entry into service event (entry) ● Date of entry into service episode (entry) ● Type of service requested
	Event - Health and welfare service event - Exit/leave from service event	Event - Health and welfare service event - Exit/discharge from service event	<ul style="list-style-type: none"> ● Date of exit from service event (exit/cessation of service) ● Date of exit from service episode (exit/cessation of service)

	Location - Service delivery setting	Location - Service delivery setting	● Service delivery setting
	Enabling factors - Financial resource item	Enabling factors - Resource	● Funding source (pre-service)
		Event - Health and welfare service event - Referral event	● Source of referral (pre-service) ● Referral outcome
From whom (Service delivery - implementation)	Party - Organization - General	Party - Agency - General	● Establishment identifier ● Region code ● State identifier ● Establishment number
	Party - Service provider role	Party role - Service provider role	● Full-time/part-time employment ● Employment status ● Provider type
At what cost (Service delivery - implementation)	Expenditure - Recurrent expenditure	Event - Economic transaction - Expenditure	● Amount of assistance received (cost)
With what effect (Evaluation)	Event - Health and welfare service event - Exit/leave from service event	Event - Health and welfare service event - Leave from service event	● Main reason for cessation of services

The Validated Data Dictionary

Post-validation review resulted in over 30 modifications to the Preliminary Validated Data Dictionary. Changes made to the Preliminary Validated Data Dictionary included:

- The addition of self-referral as a category in 'referral outcome';
- The addition of secondary diagnosis issues (eg, disabilities and co-morbidity) to 'principal diagnosis'; and,
- Dividing 'type of usual accommodation' into type of usual accommodation when entering and exiting a service.

Additional suggestions that require further consideration were that:

- 'Parental status' be included as a data item; and
- More detail is required regarding client situation when entering and exiting a service (particularly for outcome measurement). Data items regarding employment status, income status and housing type could be provided on entry to and exit from service.

The distinction was made between reporting information at the group level as opposed to the event level, as is currently the case. It appears that there are a number of data items that would be more useful if reported at the group level. That is, the following data items may be more applicable to a type of service provided by an agency in general, rather than an individual occasion of service provision:

- Funding source
- Full-time or part-time employment status
- Employment status
- Provider qualifications

The Data Dictionary - Non-government Mental Health Services contains data items that are replicas of data items contained in other data dictionaries, adapted from other data items or new data items that were considered especially relevant to the non-government sector. Where a data item was not modified from a national Data Dictionary (ie, NHDD or NCSDD), it retained its original Administration Status and Knowledgebase ID. However, an Administration Status of 'Proposed' and a Knowledgebase ID of 'To be Announced' were applied where the data item was new or modified in any way.

Several modified data items were essentially the same as their source items in the NHDD and the NCSDD. However, any references to the institutional or community setting were replaced with reference to the non-government setting. The source documents for the data items in the validated Data Dictionary are indicated under 'Administrative attributes' in the Data Dictionary. For several data items, only the context and terms not consistent with service delivery in the non-government sector were modified. Table 2 delineates those data items that are unchanged, modified, new and deleted based on the NHDD and the NCSDD. Eight data items were unchanged, 17 were modified, 12 were added and two deleted.

2: Unchanged, modified, new and deleted data items in terms of the NHDD and NCSDD contained in the validated Data Dictionary - Non-government Mental Health Services

<u>Data item</u>			
<u>Unchanged</u>	<u>Modified</u>	<u>New items</u>	<u>Deleted items</u>
<ul style="list-style-type: none"> ● Country of birth ● Need for interpreter service ● Period of residence in Australia ● Preferred language ● Principal source of income ● Area of usual residence ● Indigenous status ● Marital status 	<ul style="list-style-type: none"> ● Establishment level ID ● State identifier ● Region code ● Establishment number ● Service event participation ● Service episode ● Service event ● Date of entry into service episode ● Date of exit from service episode ● Date of entry into service event ● Date of exit from service event ● Type of service requested ● Source of referral ● Date of birth ● Principal diagnosis ● Sex ● Full-time/part-time employment status 	<ul style="list-style-type: none"> ● Service group ● Level of planning ● Referral outcome ● Main reason for cessation of services ● Amount of assistance received (cost) ● Amount of assistance received (time) ● Service delivery setting ● Client type ● Funding source ● Employment status ● Provider qualifications ● Type of usual accommodation 	<ul style="list-style-type: none"> ● Labour force status ● Total equivalent full-time staff (paid)

The Standard Data Set

The SDS - Non-government Mental Health Services, a subset of the

Data Dictionary menu, contains 15 data items as presented in Table 3. Most items contained in SDS refer to *who receives* the service and *from whom* they receive it. Eight of these items address who receives a service, five items address what service was provided, and two from whom the service was received. Data items addressing *at what cost* the service was provided and *with what effect* were not included in the SDS.

3: The 15 data items proposed for the Standard Data Set - Non-government mental health services

<u>Leginski's questions</u>	<u>Data items</u>
Who receives	<ol style="list-style-type: none"> 1. Person ID 2. Client type 3. Date of birth 4. Indigenous status 5. Sex 6. Principal diagnosis 7. Preferred language 8. Country of birth
What services	<ol style="list-style-type: none"> 1. Source of referral 2. Date of entry into service event 3. Service event participation 4. Service group 5. Date of exit from service event
From whom	<ol style="list-style-type: none"> 1. Establishment ID 2. Full-time/part-time employment status
At what cost	
With what effect	

Discussion

The contribution of the Data Dictionary, and the SDS in particular, in satisfying the information needs of key stakeholders is discussed in the context of [Leginski et al.'s](#) (1989) framework: who receives, what services, from whom, at what cost and with what effect?

Who receives?

Socio-demographic information about clients can be used to assemble profiles of those accessing and receiving services in terms of their diagnosis ('principal diagnosis') and level of need (as indicated by 'age', 'sex', 'need for interpreter service', 'area of usual residence' and 'preferred language'). Data items addressing *who receives* services recognize that different population sub-groups may use different kinds and amounts of services, at different costs. Such information is of value in planning for services; that is, ensuring sufficient service availability, for utilization review and for understanding differences in the costs of various service groups or programs ([Leginski et al. 1989](#)).

Psychiatric illness may fluctuate in acuity and intensity of symptoms and subsequently affect the nature and severity of the disability and the need for services ([Department of Human Services 1998](#)). Such disabilities are often, but not always, associated with their principal diagnosis. Therefore, 'principal diagnosis' alone is a poor predictor of the type of service needed. In the standard data set, five other demographic indicators accompany principal diagnosis.

Client information also may be useful for comparative analysis of differential service use by population sub-groups. An emphasis on developing services for people with special needs is a policy direction of Victoria's framework for service delivery ([Department of Human Services 1998](#)). People from culturally and linguistically diverse backgrounds and Aboriginal people were identified as 'groups with special needs' by the Mental Health Taskforce's Committee on Resource Needs for Community Services ([McDonald et al. 2000](#)). The Committee reports on recent evidence that migrants from non-English-speaking backgrounds (NESB) were one and a half times more likely to present to specialist mental health services than Australian-born people. The information provided by the SDS will enable such demographic comparisons to be made, with respect to access and equity of service delivery.

Data items such as 'need for interpreter service', 'period of residence in Australia', 'preferred language' and 'country of birth' are included in the Data Dictionary to provide the potential for planning for multi-lingual services and analysis of changes in morbidity in ethnic sub-populations related to length of stay in a host country ([McDonald et al. 2000](#)).

Client data, in particular the 'Client identifier' contained in the SDS, supports a focus on continuity of care for a client within an organization and intra-sectorally. The client identifier enables previous records to be accessed, assisting the service provider to provide appropriate support and track an individual over time.

What services?

Answers to this question should describe the pattern and frequency of occurrence of health service events ([Morris-Yates & Andrews 1997](#)). Two data element concepts were included in the Data Dictionary, which act as units of measure for defining *what services* are provided. The service event data item is described by a cluster of data elements that provides information about when it happened, where it happened, the type of service that was provided and the amount provided.

The service event occurs within the parameters of the service episode, defined as the period marking the first and last times that a client received assistance (a service event) from an NGO. Service episode data were not included in the SDS. Reporting information about each service event provides an indication of the total care received by an individual. It does not capture all the activities performed by an organization, including administrative and support events.

From whom?

Typically, service providers require information about the establishments and associated service units for which they have responsibility. *Whom* is limited to those staff and volunteers involved in providing services either directly to, or on behalf of, the client. However, [Leginski et al. \(1989\)](#) observe that *whom* should apply to the full organization and not only to those involved in service provision. The authors suggest that reporting at this level is not feasible for the non-government sector.

An employee's affiliation with an NGO in terms of their full-time or part-time employment status and voluntary or involuntary

employment status is of relevance to service providers for the purpose of evaluating the appropriateness of staffing levels. It is also important to analyse how costs, productivity and service patterns may be affected by configuration of affiliations ([Leginski et al. 1989](#)).

At what cost?

Costs in mental health result mainly from an interaction between the service activities of an organisation and the staff involved in delivering them. Most mental health organisations are under increasing pressure to provide and support quality services to the mentally ill and, at the same time, demonstrate solvency and fiscal accountability ([Leginski et al. 1989](#)).

The capacity of the non-government sector to report on the costs associated with service provision is very limited at this stage of development. The data item 'Amount of Assistance Provided (cost)', taken from the HACC NMDS, requires further development before it can be considered for field testing with the sector.

With what effect?

Although strengthening the focus on consumer outcomes was a priority of the Second National Mental Health Plan, routine measurement of consumer outcomes in public and private sector mental health services is yet to occur. It is proposed that the measurement of outcome in the non-government sector, using instruments such as the Life Skills Profile ([Trauer, Duckmanton & Chiu 1995](#)), is not practical for this first generation of information development. Many issues need to be considered prior to the implementation of outcome measures in the SDS, including the identification of changes required to the existing information infrastructure to allow routine collection and reporting of consumer outcome data, the associated costs, workforce training requirements ([Department of Health and Aged Care 1998](#)) and whether the health outcomes experienced by a client are due to the service received ([Morris-Yates & Andrews 1997](#)).

The analysis of the information recorded into the SDS should provide the basis for informed planning. However, it is anticipated that the integrity of the data provided may be somewhat compromised if service providers are asked to report on too many variables. In terms of the HACC program outcome indicators, the SDS - Non-government Mental Health Services addresses the use of services by special-needs groups and the range and level of services provided.

Implementing the SDS

Despite the absence of an electronic information system in both the Western Australian and Victorian non-government sectors, integrating the SDS into the routine operations of the organisation should not be too difficult. The paper-based outputs already produced by Victorian service providers cover all of the data items included in the SDS. Information collected from the Western Australian non-government sector is not as comprehensive but still contains the data items included in the SDS - Non-government Mental Health Services. Information about *who receives what services* is already a part of the internal management information of most non-government providers. Therefore, the SDS should not require the instigation of specialized data collection activities to satisfy reporting requirements.

The number of variables in the SDS - Non-government Mental Health Services was kept to a minimum because, once agreed to and

endorsed, the SDS will become a compulsory reporting tool, or MDS. Additional data items cost money in staff time and, by degrading the quality of existing items, as less care may be taken over each item ([Andrews, Wilton & Wilkins 1992](#)). In developing a nationally applicable MDS that is amenable to improvement, the most generic data items that were representative of the non-government sector were included in the SDS. However, it should be noted also that for the purposes of internal management, data items always can be expanded or tailored, as long as the added details can be collapsed under the existing categories, to meet the requirements of individual NGOs ([Leginski et al. 1989](#)).

As the classification of service groups did not examine the types of services provided by all NGOs (only those funded by the Mental Health Divisions of the Health Department of Western Australia and the Victorian Department of Human Services), the 'service group' data item in the SDS may not encompass all possible service types. However, as this is intended to be a nationally applicable MDS, the State-government-funded sectors used as the sample in this study are considered to be representative of the entire sector, albeit not exhaustively so. In any case, only those NGOs with at least one source of funding from a state or Commonwealth government may be required to report into the NMDS. Under these circumstances, the reporting options for the 'service group' data item contained in the NMDS should accommodate all service providers.

Conclusion

The Data Dictionary makes a valuable contribution to satisfying the information needs of key stakeholders by addressing [Leginski et al.'s](#) (1989) data content standards; however, addressing Leginski et al.'s entire framework as the minimal functional specifications for an information system ([Morris-Yates & Andrews 1997](#)) is not feasible for a preliminary NMDS in the non-government sector. While the Data Dictionary provides the potential for addressing the decision standards, the proposed SDS only addresses *who receives, what services, from whom*.

The SDS offers a foundation for evidence-based analysis and planning of service delivery in the non-government sector. Data items can be examined alone or in conjunction with other items in the SDS and the full set of data items has greater explanatory power than each data item alone.

The contribution of the Standard Data Set – Non-government Mental Health Services to the planning process may be somewhat in its infancy given the minimal nature of its content; yet, this should be balanced by an appreciation of the non-government sector's capacity to compulsorily collect and report information. While patient-level data was included in the Data Dictionary and SDS, future data development work should aim to incorporate establishment-level data items. Such information was considered beyond the preliminary reporting capacity of the non-government sector.

The final stage of the NMHSIP, requiring the development and implementation of an information system, is being undertaken by the Victorian Department of Human Services.

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