

# **Integrated Mental Health Data Process Standard**

**HISO 10023.1**

To be used in conjunction with:  
HISO 10023.2 – PRIMHED Data Set  
and HISO 10023.3 – PRIMHED Code Set

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## Related documents

The documents listed below have been used in the development of this standard. They may provide further clarity, if required.

### NZS/AS

AS/NZS 7799.2 Information security management. Part 2: Specification for information security management systems. (This standard was redesignated from AS/NZS 4444.2:2000).

### ISO

ISO/IEC 17799 Information Technology – Code of practice for information security management. (This standard supersedes AS/NZS 4444.1:1999).

ISO/IEC 11179 ISO Standard 11179-3 Information technology – specification and standardization of data elements. Part 3: Basic attributes of data elements, 1994.

### Other standards

HL7 V2.4 Health Level Seven Standard Version 2.4. Ann Arbor: Health Level Seven Inc., 2001.

HISO Ethnicity Data Protocols for the Health and Disability Sector. Wellington: Ministry of Health, 2004.

HISO Health Practitioner Index Common Code Set.

HISO 10005 HPI Data Set. Wellington: Ministry of Health, 2004.

HISO 10006 HPI Code Set. Wellington: Ministry of Health, 2004.

HISO 10011.1 Referrals, Status and Discharges Business Process Standard.

HISO 10011.2 Referrals, Status and Discharges Messaging Standard.

### Other publications

NZSCC99 Statistics New Zealand Country Code List.

HNBC HealthNet/BC Provider Data Standards, Version 1.0.

NHDD National Health Data Committee. National Health Data Dictionary, Version 12.0. Canberra: Australian Institute of Health and Welfare, 2003.

MoH Mental Health Information Strategy – Key Directions Discussion Document, 2004.

### New Zealand legislation

Alcoholism and Drug Addiction Act 1966

Criminal Procedure (Mentally Impaired Persons) Act 2003

Health Act 1956

Health Practitioners Competence Assurance Act, 2003

Intellectual Disability (Compulsory Care and Rehabilitation) Act 2003

Mental Health (Compulsory Assessment and Treatment) Act 1992

Parole Act 2002

# 1 INTRODUCTION

## 1.1 Background

The collection of information about the utilisation of mental health and addictions services by consumers in New Zealand has been well advanced by the Mental Health Information National Collection (MHINC). MHINC was established in 1997 and first collected nationally in 2000.

Good, accurate and timely information underpins the whole mental health and addictions system. To further facilitate these principles, a commitment was made in 2002 to move from 'inputs and outputs only' information collection to also collecting information on outcomes. The MH-SMART outcomes initiative was established nationally as the enabling mechanism. At the time of writing this standard, no national collection of MH-SMART data has been attempted. However, some documents published prior to the PRIMHED Standard discuss the "MH-SMART national collection", as there was an assumption to be drawn from the MH-SMART Information Collection Protocol (ICP) that such a collection would exist in due course. Preliminary testing of the collection of MH-SMART data from selected sites is being trialled.

In 2004, the Ministry of Health developed and disseminated the *Mental Health Information Strategy – Key Directions Discussion Document* and held a number of public meetings throughout New Zealand. This resulted in a feasibility report being commissioned to investigate the benefits and risks of integrating the MHINC and MH-SMART collections<sup>1</sup>.

As part of this feasibility study, a review of international research and stakeholder consultation was undertaken. This highlighted that a collection integrating the key data elements of MHINC and MH-SMART and which allowed for the addition of further useful data elements would best serve the strategic needs of mental health and addictions policy analysis and planning for New Zealand.

Integrating MH-SMART and MHINC data into a single collection was expected to provide a number of significant benefits to the health and disability sector. These included:

- (a) improved ability to plan, fund and manage services;
- (b) improvements to health outcomes and participation over time;
- (c) addressing data quality issues in the MHINC system (where feasible and practical);
- (d) maintenance of only one mental health collection.

The integration of what would otherwise be two separate data collections will enable the sector to link outcomes with activities and will provide a framework to assist those in the sector to use information that will guide and support decision making, leading to service enhancement.

The results of the feasibility study further indicated that there would be both financial and qualitative benefits in combining the two collections. From this analysis, the Ministry of Health sought, and obtained, approval to establish a project to undertake this integration effort and this project was initiated in 2006. Known as PRIMHED (Project for Integrated Mental Health Data), an early major deliverable of the project is the development of a national standard that will provide the next step to achieving a quality-integrated national collection supporting mental health and addiction services within New Zealand.

The overarching purpose of the PRIMHED process is to define the collection of minimally-required core data elements for an integrated mental health and addiction services national collection. The PRIMHED project's purpose also is to provide:

- (a) secure information access and reporting through consistent use of benchmarking, standards and key performance indicators, to underpin decision support and policy development;
- (b) data about the value of mental health services to support workforce development activities, including cultural relevance, in order to enhance the mental health knowledge base, and to improve health outcomes for consumers.

The integration of MHINC and MH-SMART will involve the migration of the historical data currently held in the MHINC into the integrated mental health collection. The methodology/detailed mapping for this, however, is outside the scope of the PRIMHED standard suite.

<sup>1</sup> *Integrated Mental Health Data Collection Business Case – Summary Report; "Feasibility study for determining whether MHINC and MH-SMART national collections should be integrated".*

## 1.2 Principles

Principles for the establishment of the Integrated Mental Health Data Collection are as follows:

- (a) integrate service provision and outcomes data into one national collection;
- (b) integrate MHINC and MH-SMART data collections;
- (c) enable the addition of further service provision and outcome measures as required;
- (d) support views of data collection:
  - from a referral to the conclusion of that referral by a service provider or team within a service provider organisation;
  - from the point of one outcome collection to the next outcome collection occasion or occasions;
  - providing a longitudinal perspective of service provision for an individual;
  - that apply to all mental health and addiction service providers.

## 1.3 Structure of the Standard

### 1.3.1 Documents

The PRIMHED standard comprises several documents or parts of documents. These are numbered as follows:

- 10023.1 Data Process
- 10023.2 Data Set
- 10023.3 Code Set

It is intended that these documents (or parts of documents) should be read together. Their separation here is solely to simplify the structure of the standard for ease of use.

### 1.3.2 Appendices

The terms 'normative' and 'informative' are used in standards to define the application of appendices. A 'normative' appendix forms an integral part of a standard, whereas an 'informative' appendix is only for information and guidance. Informative provisions do not form part of the mandatory requirements of the standard. The appendices to this standard are as follows:

Appendix A	Glossary of Terms	Normative
Appendix B	State Diagram Notation	Informative
Appendix C	Background Data Model	Informative
Appendix D	Essential Data Relationships	Normative
Appendix E	Data Mappings	Informative
Appendix F	Data Model Notation	Informative
Appendix G	Episode of Care (MH-SMART)	Informative
Appendix H	Bibliography	Normative

## 1.4 Scope

The intent of this standard is to provide direction to mental health and addiction service providers and stakeholders to ensure that appropriate and timely information on service provision is collected at a national level, to enable relevant analysis and reporting. The standard outlines generic processes, while recognising that due to the different sizes, structures and services provided by mental health and addiction service providers in New Zealand, no one model will fit all.

These documents have been developed with significant input from a range of service providers. However, the broad nature of primary care service provision means this standard may not be suitable for all primary care situations.

This standard:

- (a) applies to all mental health and addiction service provision as defined by the Ministry of Health;
- (b) defines the data requirements for the integrated mental health and addiction national collection.

### 1.4.1 Inclusions

- (a) data set development for the integrated collection;
- (b) code sets to be used to populate items where appropriate;
- (c) data process – to assist in the collection of mental health data;
- (d) a glossary of terms to be used in these standards, to ensure consistency of language used.

### 1.4.2 Exclusions

- (a) infrastructure and hardware items for the system;
- (b) technology application architecture, systems and networking in relation to PRIMHED data collection and MHIRS;
- (c) data security or privacy requirements and issues including personally identifiable data;
- (d) the physical requirements for integration of the 'CLIC' problem gambling register data elements into the PRIMHED structure;
- (e) contractual reporting requirement specification.

See assumption 1.5.2(d) below.

## 1.5 Assumptions

Within the PRIMHED standard a number of assumptions concerning other systems, collections, data or processes are made. These assumptions are listed below, in no particular order:

### 1.5.1 Maintenance and review

- (a) the standard will need to be reviewed within three years of its implementation to ensure it remains valid for changes that occur within the mental health and addiction sector such as;
  - the inclusion of further work on outcome measures and factors that influence outcomes;
  - the role of primary care providers;
  - the Key Performance Indicator (KPI) project;
  - the review of 'Focus of Care';
  - collection of restraint information.

### 1.5.2 Further development

- (b) the Ministry of Health will develop a new information collection protocol for the PRIMHED collection;
- (c) code sets covering the broader range of activity codes for services applicable to Non Governmental Organisations (NGOs) will be developed;
- (d) all excluded items in section 1.4.2 above will be addressed by the Ministry of Health PRIMHED project.

### 1.5.3 *Data model*

- (e) the code sets and data sets – via the reporting capabilities – will allow for the identification of all mental health service and addiction providers' participation in a consumer's treatment
- (f) as far as possible, the background data model takes account of the data requirements for the mental health KPI project;
- (g) relationships detailed in the background data model are maintained in the final schema. Refer to Appendix D for a list of the key essential data relationships;
- (h) the data model includes data that can be reasonably collected at source as part of service provision.

### 1.5.4 *Data use*

- (i) it is a PRIMHED business requirement that service providers submitting data to PRIMHED will have access to that information from the national collection.

### 1.5.5 *Relationship to other standards and systems*

- (j) PRIMHED demographic information will be updated in the NHI;
- (k) HPI will be available to service providers;
- (l) where a healthcare worker is referenced in the data this will be through recording the healthcare worker's unique identifier (HPI Common Person Number (CPN));
- (m) an HPI CPN will be allocated to every healthcare worker whose activity is covered by this standard;
- (n) where it is mandatory for the data supplier to provide a healthcare worker's CPN, the healthcare worker will have an HPI CPN;
- (o) data related to demography, ethnicity and domicile (including sufficient time-based data to allow the derivation of a consumer's history in all of these information areas), will be derived from the NHI national collection or other relevant and appropriate sources.

### 1.5.6 *Use of the standard*

- (p) the PRIMHED data sets, code sets and business processes apply to all mental health and addiction services service providers in the secondary and tertiary sectors;
- (q) the data and code sets provided by the standard for the national collection are not intended to limit what local service providers may collect in the course of their service delivery or clinical practice;
- (r) activity records will be transactional in the PRIMHED collection;
- (s) DHBs may make local arrangements for interrogating district level data from multiple service providers;
- (t) the data and code sets may have information not supplied by the service providers, e.g. team type codes;
- (u) sufficient time-based data will exist to allow the derivation of history on a practitioner relevant to information reporting from the integrated mental health national collection.

### 1.5.7 *Infrastructure*

- (v) infrastructure support is required to enable NGOs to participate effectively in the PRIMHED initiative.

## 1.6 Interpretation

For the purpose of this standard, the words 'shall' and 'will' refer to the practices that are mandatory for compliance with this standard. The words 'should' and 'may' refer to practices that are advised or recommended.

## 2 DATA COLLECTION PROCESSES

### 2.1 Overview

For the purpose of this standard, data collection is divided into five parts, as follows:

- referrals, exits and associated activities;
- collection occasions and related information;
- healthcare consumer;
- mental health and addiction service teams;
- healthcare worker, facilities and organisations.

The first two parts can be described by a sequence of states reflecting the main components of the core PRIMHED data model. Healthcare consumer data is represented through the use of the NHI. Mental health and addiction service team data is managed by the Ministry of Health through an administrative process with providers. Healthcare worker, facilities and organisations are represented through the use of the HPI.

There exist a variety of different configurations of services and service delivery models for mental health and addiction consumers throughout the country. Despite this variability, a generic model can be created to outline the processes that trigger the collection of various data elements.

With the introduction of outcome measurements, Mental Health Standard Measures of Assessment and Recovery (MH-SMART), there has been an increase in the volume and complexity of information being collected. Mental health and addiction episodes (like the majority of healthcare episodes) follow a standard pattern of referral, entry, treatment and/or support and exit. Outcome measurement has been added to the service delivery information captured within the Mental Health Information National Collection (MHINC).

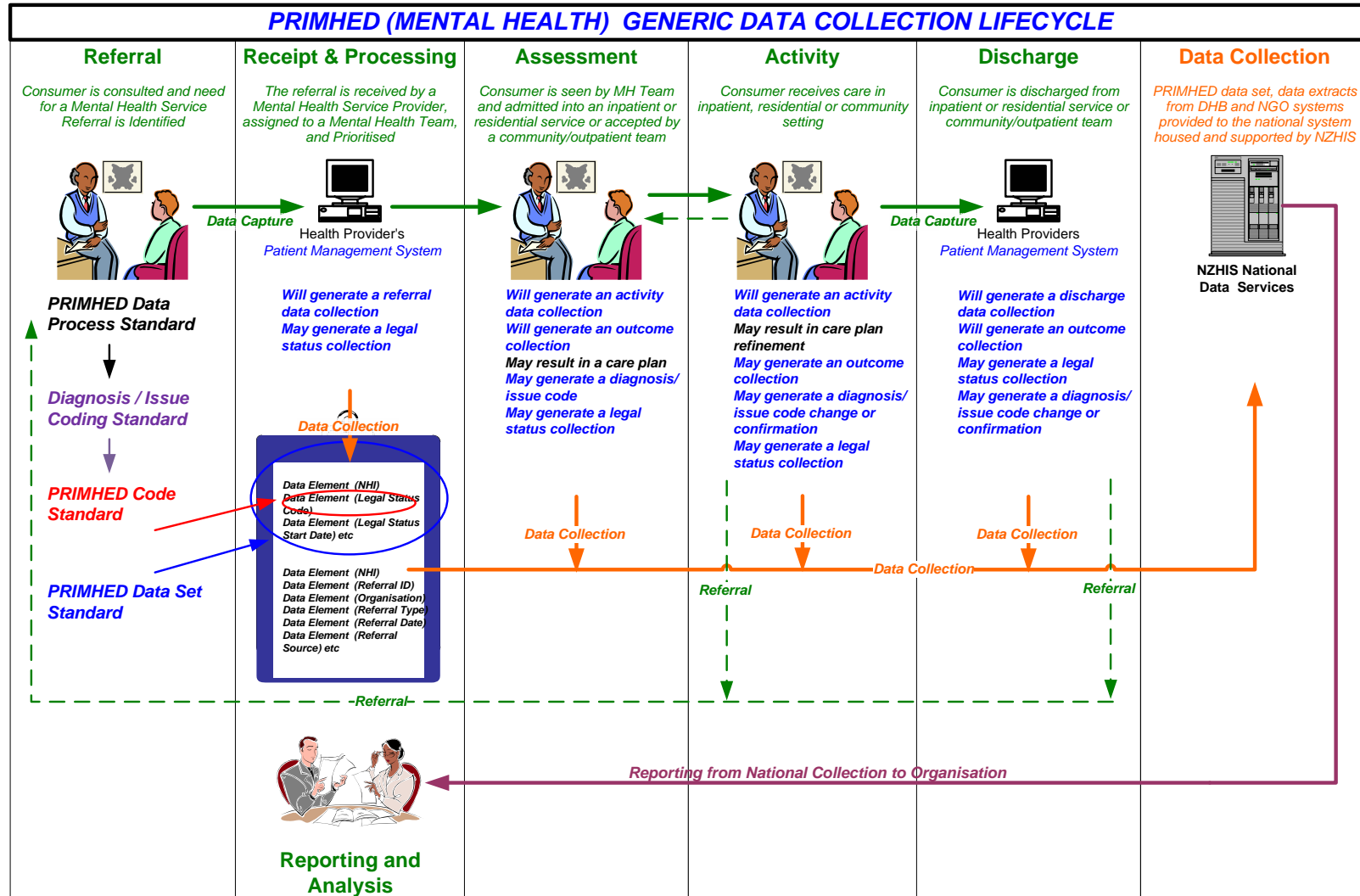
#### 2.1.1 PRIMHED generic information lifecycle

The generic process for mental health and addiction service provision, the collection of data from a team/provider within the lifecycle and the application of the standard to this process, is illustrated in Figure 1 below.

This generic information lifecycle falls within an overall sequence of events and processes, commencing with a referral and ultimately terminating with a discharge. Data collection occurs at various stages throughout this lifecycle.

The generic lifecycle diagram seeks to indicate PRIMHED data collection points. Some data, notably legal status, may be collected at any point throughout the lifecycle.

# The Application of the Standard



**STANDARDS KEY:** Key Component Standards : Data (PRIMHED Code Set : PRIMHED Data Set) : Issue Coding : Process (Data Collection, Referral, National Collection/Organisational)

Figure 1 – PRIMHED generic data collection information lifecycle

## 2.2 Referral to Exit

### 2.2.1 High-level state diagram

A state diagram describes processes in terms of a starting point and an ending point, with a sequence of states and state transitions between them. A state is a concrete example of an object in the process; this might be, for example, a completed document, a finished set of data inputs in a computer system, or the treatment of a consumer by a clinician and the resulting information from the completion of that treatment. A state transition is a process that causes a change from one state into the next state. There may be decision-points between states that create different transition pathways.

The diagramming conventions and nomenclature for state diagrams presented in this standard are those used in the Unified Modelling Language (UML) and a summary of them is provided in Appendix B State Diagram Notation.

Figure 2 – High-level referral to exit state diagram indicates the process points at which data may usually be captured within the generic information lifecycle.

A referral passes through the consumer care/support event pathway, as shown in Figure 2, and may exist in any of the states indicated. Any given referral may pass through only some of the states and transitions possible. The sequence occurs as outlined, though the timeframe over which this occurs may vary.

Within this standard, referrals and exits are grouped into a structured data set generically termed a “Referral\_Discharge” (refer to the PRIMHED background data model for a representational view of this data structure). Transfers are viewed as a special case of a referral and are therefore not explicitly referenced.

A referral, an exit and the outline state transition processes as shown in Figure 2 may be described in general terms as follows:

- (a) The referral is a request from a healthcare team or provider to another, for advice about – or treatment and/or support of – a consumer. Mental health and addiction services referrals can also be received directly from the consumer or the consumer’s family/whanau/significant other (self or relative referral), or via another agency.
- (b) The referral is received by a mental health and addiction service team/provider and will progress through a lifecycle. The referral state changes from ‘received’, to ‘assigned’, to ‘prioritised’, before the consumer is admitted to an inpatient facility or an appointment time is ‘booked’ for the first assessment by the ‘referred to’ healthcare provider.

All referrals shall be registered, regardless of whether they are declined or not, as otherwise information on un-met demand can be lost.

Within a referral, a particular team will be allocated responsibility for the consumer. This team will be responsible for ensuring that a comprehensive assessment has been completed or assessment information is received, as well as an appropriate outcome measure where relevant, and that an appropriate diagnosis is collected. Outcome measurement and diagnosis will be discussed more fully in the following sections of this document. The responsible team may refer the consumer on to another internal or external team(s). This referral may take one of two forms:

- 1) the responsible team may request service from another inpatient, residential or community team as part of the consumer’s treatment and not transfer responsibility, or;
- 2) the responsible team may transfer responsibility to the referred-to team.

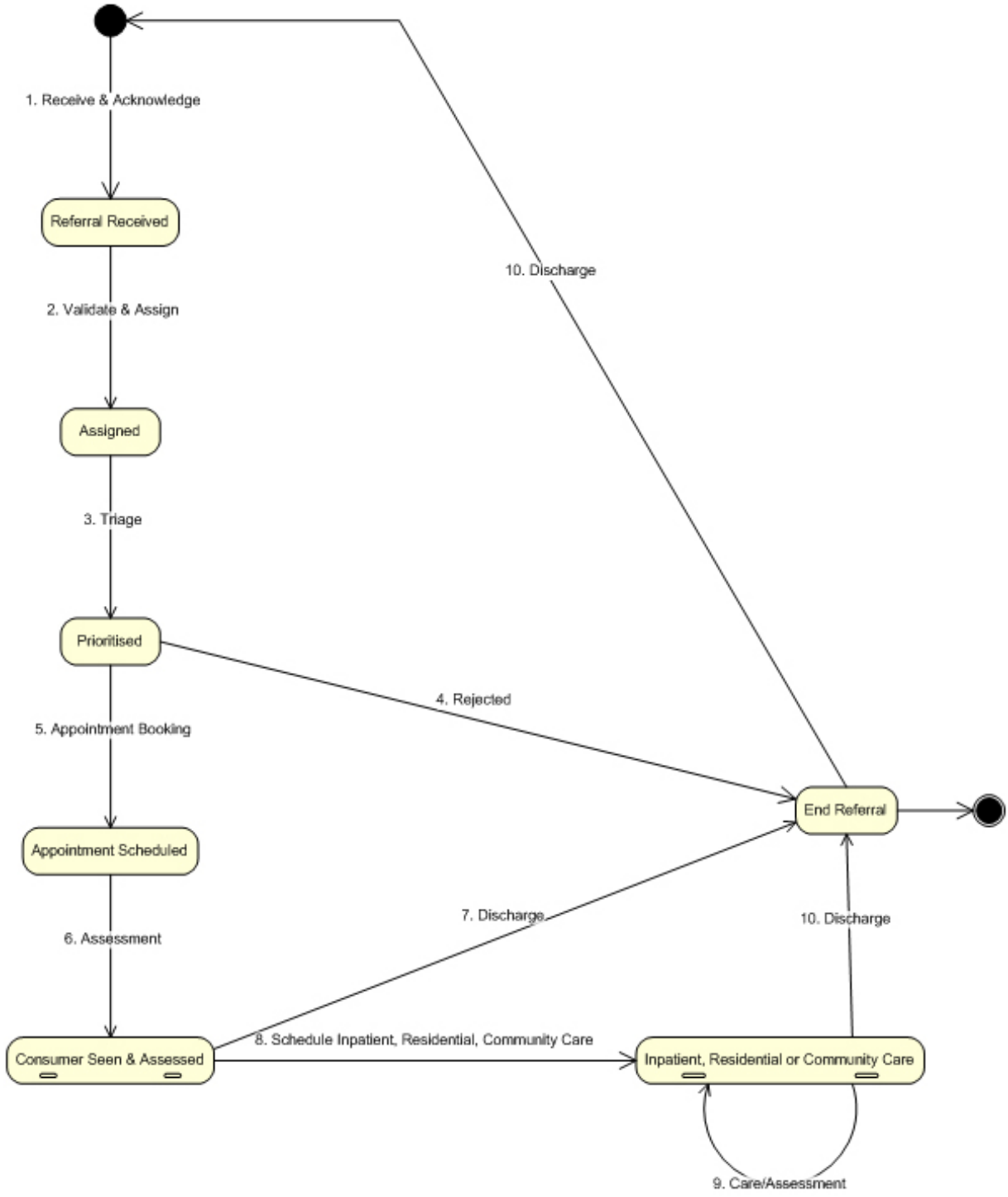
**Note:** *For this reason a new referral should be opened for each team that a consumer receives services from and each referral should be closed when the team is no longer providing services to a client.*

In the second instance an exit referral would take place and a new referral would be commenced.

**Note:** *Where a consumer is exited from the care/support of one service into the care/support of another service or other agency, a new referral will always be created if no open referral already exists.*

The standard recognises there are a variety of service configurations within the mental health and addiction sector. One consumer may have numerous different services being provided under the one referral, whereas another consumer may have separate referrals to several teams for the provision of those services. Regardless of these differences, the data will be reported in a consistent manner to enable meaningful comparison.

An exit occurs at the termination of the overall referral process, with the departure of the consumer from the immediate knowledge of the team/provider. Note that the consumer might not leave the care/support system entirely in this case, but any subsequent referral to further care/support, or the further care/support itself, may be unknown to the team/provider in the current referral state life cycle. In this situation, a “lost to care” or similar exit state is created. An exit is an explicit state in its own right within the process.



**Figure 2 – High-level referral to exit state diagram**

Table 1, below, summarises the states in Figure 2 – it outlines the information that is captured at each state and describes this information in general terms.

State Transition	Resultant Referral State	PRIMHED Information Collected
1 Referral received	Referral recorded and acknowledged	Referral_Discharge data (not including Referral_End_Code, End_Date, End-Time).
2 Validate and Assign	Assigned	Administrative step where applicable. Recorded locally only.
3 Triage	Prioritised	Activity (not including End_Date, End_Time).
4 Rejected	End referral	Referral_End_Code, End_Date, End-Time.
5 Appointment booking	Appointment scheduled	Administrative step where applicable. Recorded locally only.
6 Assessment	Consumer seen and assessed	Activity, may involve collection of data for Classification, Collection_Occasion (and child table data).
6 Care/Assessment	Ongoing care/support	Activity, may involve collection of data for Classification, Collection_Occasion (and child table data).
7 Exit	End referral	Referral_End_Code, End_Date, End_Time.
7 Exit (from a particular team)	End referral	Referral_End_Code, End_Date, End_Time.
8 Schedule inpatient, residential or community care	Ongoing care/support	Administrative step where applicable. Recorded locally only.

**Table 1 – Referral states and associated information transfer**

### 2.2.2 Activity

The PRIMHED standard describes all service provision to a consumer as an ‘Activity’. The intent of this description is to engender a more generic and future-oriented view of the information elements that may be collected from a variety of service provisioning sources, rather than to limit the information collection to only a narrowly-defined set of services or service providers.

Activities include services delivered to a consumer once an interaction happens between the consumer and the service provider. A service may take a variety of forms such as, but not limited to: treatment and/or support provided by a mental health and addiction inpatient facility, or by a specialised mental health outpatient clinic either on healthcare sites or within the community, or by a residential facility. For example the service may be provided on a one-to-one basis, as part of a group session via telephone or audio-visual links. Activities can be provided by a variety of different teams, including teams that would normally operate in the community or outpatient setting, providing services to consumers within an inpatient or residential setting.

The activity information structure allows for data on particular types of treatment to be collected, although currently there is no intention within the sector to record details of treatments given to consumers.

If treatment is carried out on separate occasions, a separate record would be sent to the national collection for each occasion.

Activity information collected relates to:

- (a) the type of service provided;
- (b) the mental health and addiction team and healthcare worker that provided the service;
- (c) the service setting;
- (d) the start and end date and time of the activity.

In inpatient and residential settings, duration is generally measured in “bed nights”. A “bed night” is a bed occupied at midnight. Activities set in outpatient clinics or within the community are generally measured in terms of contacts with the consumer. Provision has been made within the PRIMHED data collection to record dates and times that activities are provided, including end dates and times, allowing for activities to be correctly sequenced.

An activity may also include support services, such as assistance with housing or employment.

Service setting information in MHINC has a mix of physical location and communication types (e.g. specified inpatient facility, telephone or audio-visual). The PRIMHED standard takes the position that there should be two fields for this purpose: one recording team code (from which the facility can be derived), the other the type of communication (as an activity type).

MHINC currently does not record when a consumer is on leave. If a bed is held for the consumer, it is classified as a bed night. The PRIMHED-recommended solution is to have a new activity (service) type of “on leave”.

The standard will collect data on ‘Seclusion’ and Electroconvulsive Therapy (ECT).

### 2.2.3 Classification

This section of the standard addresses data collected on the reason(s) for a person being a recipient of a mental health and addiction service. The standard recognises that there is a range of terminology used across service providers and healthcare practitioners to describe this, including terms such as “presenting problem”, “complaint”, “issue”, and “diagnosis”.

Provision is made in the standard for this range of terminology, as follows:

#### 2.2.3.1 Diagnosis

Diagnosis is one term widely used to provide descriptions of presenting problems and/or conditions being experienced by a person. Diagnosis is utilised by way of formally defined, international classification systems and these are included in the PRIMHED standards for data set and code set. Diagnosis is frequently used by medically trained healthcare practitioners and may be referred to as clinical classification.

Due to the nature of mental health and addiction issues, it is sometimes not possible to provide a definitive diagnosis at the initial assessment of the consumer. In these instances, a provisional diagnosis will be made. As treatment progresses, a principal diagnosis can be made. If, over a period of time, there is a change in the diagnosis of the consumer, a new diagnosis will be recorded. This may be within the same referral and in this case the new diagnosis will be recorded in the local system, with the diagnosis data ultimately being sent to the national collection as a new diagnosis record.

**Note:** *A history of diagnoses will be maintained in the national collection.*

All mental health consumers of DHB provider arm teams are to be assessed and a diagnosis documented within 91 days of the activity start date, or by the activity end date (whichever of these time periods occurs first). Where NGOs are clinically determining diagnosis, they are responsible for providing details of that diagnosis.

#### 2.2.3.2 Issues

Many mental health and addiction service providers use classifications that provide the ability to capture wider non-clinical mental health and addiction issues or problems.

The rules and classification systems for issue coding other than diagnosis have not yet been formally ratified. However the following general rules will apply:

- (a) issues may be collected as well as diagnoses;
- (b) multiple issues can be collected for each referral;
- (c) a minimum of one diagnosis or issue must be collected for any one referral;
- (d) a primary issue should be identified at the completion of assessment.

### 2.2.4 Exit

Exit occurs when the consumer ceases to use the services of the referred to healthcare provider/team. Exit may also occur after a period of time during which no contact with the consumer has occurred within the

service provider organisation. This 'deemed' exit is usually denoted as "lost to care" or similar terminology. A further type of exit event occurs upon the death of a consumer.

An exit may include a referral to another team, or to the original referrer.

## 2.3 Consumer

The PRIMHED standard approaches the recording of data relevant to individuals who are healthcare consumers in terms of non-replication of existing national collections or other relevant structures. Thus, this standard explicitly includes a record of a consumer's NHI. The PRIMHED standard makes the assumption that data related to demography, ethnicity and domicile (including sufficient time-based data to allow the derivation of a consumer's history in all of these information areas) will be derived from the NHI national collection or other relevant and appropriate sources.

### 2.3.1 Legal status

Directors of Area Mental Health Services (DAMHS) are responsible for recording legal status under the appropriate section of the Mental Health (Compulsory Assessment and Treatment) Act 1992, Alcoholism and Drug Addiction Act 1966 and the Criminal Procedure (Mentally Impaired Persons) Act 2003.

A consumer may be under more than one Act at any one particular time. Legal status may have commencement and finish dates recorded as either date/time or date. Where a time is noted by the DAMHS office, the time shall be recorded.

Changes to legal status are independent of the referral, being directly related to only the consumer. As noted in section 2.1.1 above, the legal status data for a consumer may be assigned and collected, or may change, at any point within the overall care/support process.

## 2.4 Collection Occasion

In order to reflect a consumer's progression through one or more mental health and addiction services, it is important that there are measures in place to understand the consumer's circumstances at points in time and their corresponding issues or level of wellness. If they are in the service for an extended period of time (greater than 91 days), then review measures are collected. The introduction to New Zealand of the Mental Health Standard Measures of Assessment and Recovery (MH-SMART) in 2004 provided a framework with which mental health and addiction clinicians could assess consumers, using a nationally-standardised assessment tool.

The collection of standard measures (outcomes) usually takes place at least twice on a consumer's journey through the mental health service. The only exception to this general rule is when the consumer is referred to the mental health and addiction service for an assessment only, in which case just one standard measure collection is recorded. In the usual situation, the first measure is collected at the initial assessment, the last within 72 hours of exit. Currently for the HoNOS suite, a review assessment is made every 91 days when the consumer's treatment is extended for more than 91 days, or at other clinically significant points.

Outcome measures, administrative data and period of care data are collected in accordance with the collection protocol.

Information is collected relating to the nature and level of cultural support services provided to the consumer in the preceding period of care/support. This data will be collected by all mental health and addiction providers/teams as activities within the PRIMHED dataset.

The Focus of Care (FOC) records information relating to the principal clinical intent of the care/support provided during the period of care/support preceding the collection occasion.

Outcome measures are collected at specified times during a consumer's contact with clinical services, including the option of *ad hoc* reviews. The status of the outcome measure may change between draft and completed.

**Note:** *Only completed outcome measurements are required to be reported/transmitted to the NZHIS. As a result, only the finalised (completed) state is indicated in this standard, the draft state being irrelevant to it.*

The collection of outcome measures is sequential ('Entry-Exit', 'Entry-Review-Exit', or 'Entry-Review-Review etc-Exit').

**Note:** *Status reports and/or reminders should be available locally for auditing, compliance, data integrity and quality checks.*

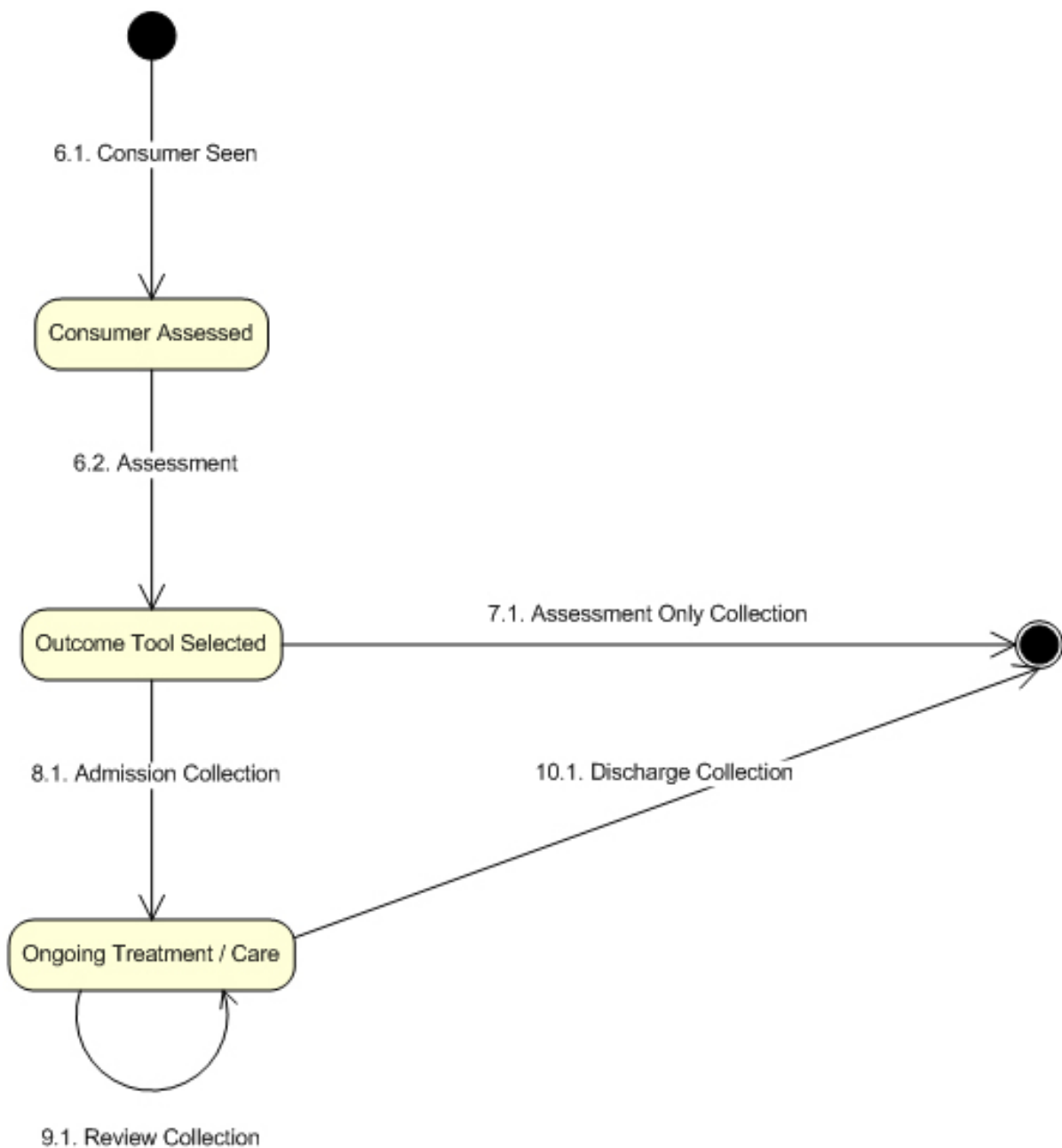
At present, outcome measurement tools in use are HoNOS, HoNOS65+ and HoNOSCA. The additional measures for learning disabilities (HoNOSLD) and secure status (HoNOS Secure) are available but are not mandatory.

Following referral and assessment, the outcome measure is collected at the following times:

- (a) on entry to a service provider organisation/team;
- (b) at review intervals, planned and ad hoc, while still under care/support;
- (c) upon exit from a service provider organisation/team (including where responsibility is transferred to another organisation/team) and/or;
- (d) on entry to and exit from different service settings (inpatient or community), within the same service provider organisation/team.

For full details refer to *NZ Mental Health Standard Measures of Assessment and Recovery (MH-SMART) Initiative – Information Collection Protocol v1.2*

Figure 3, below, indicates the points at which information is collected on the condition of a consumer during the consumer’s journey through the mental health and addiction services:



**Figure 3 – High-level collection occasion state diagram**

The table below summarises the states associated with the recording of collection occasions, outlines the information that is captured at each state and describes this information in general terms.

State Transition		Resultant Referral State	PRIMHED Information Collected
6.1	Assessment	Outcome tool selected	Activity
7.1	Assessment Only collection	End Referral	Reason for collection, Collection_Occasion data, Outcome_Tool data, Outcome_Item data, Classification data, Activity data.
8.1	Entry collection	Ongoing treatment / care/support	Collection_Occasion data, Outcome_Tool data, Outcome_Item data, Activity data.
9.1	Review collection	Ongoing treatment / care/support	Collection_Occasion data, Outcome_Tool data, Outcome_Item data, , Classification data, Activity data.
10.1	Exit collection	End Referral	Collection_Occasion data, Outcome_Tool data, Outcome_Item data, Classification data, Activity data.

**Table 2 – Collection occasion states and associated information**

### 3 BUSINESS RULES AND IMPLEMENTATION GUIDELINES

To ensure that high quality data populates PRIMHED, it is imperative that all data submitted from organisations provides a complete and accurate picture of the passage through the mental health and addiction services taken by a consumer. The national system is not intended to be a clinical record for a particular Consumer. It is, however, intended to inform local, regional and national decision makers on the volume and nature of the services and treatment provided and an indication of the change in well-being (outcome measures) of the consumer.

The following business rules have been drawn from the MHINC and MH-SMART business rules, along with recommendations from the MH-SMART and MHINC Integrated collection feasibility study. A comprehensive list of business and validation rules will be published in the PRIMHED file specification document.

General Area	Business Requirement	Business Rule	Implementation Guideline
Information quality	<p>To ensure that the information provided satisfies the mandatory and accuracy requirements, i.e. mandatory fields are populated and with valid values (where validity may be checked).</p> <p>Coded fields contain valid values.</p>	<p>Basic validation:</p> <ul style="list-style-type: none"> <li>(a) exit date or referral date shall not be before DOB;</li> <li>(b) exit date or referral date shall not be after today but may equal today;</li> <li>(c) exit date must be after or equal to referral date.</li> </ul> <p>NHI is entered in valid format.</p> <p>Message is not sent by sender if any mandatory field is null or data is invalid.</p> <p>Error message appears on the screen and sender has to enter information required, or fix errors before progressing.</p>	<p>System checks that mandatory fields are populated, where practical, with data that is valid.</p> <p>Build in capability to enforce data quality, but this should not stop the process from continuing.</p> <p>Use check digit to ensure NHI is valid format.</p> <p>A message shall not be sent where the minimum/mandatory requirements are not met, or there are messaging errors.</p> <p>For coded fields, only valid values shall be reported.</p>

General Area	Business Requirement	Business Rule	Implementation Guideline
Unique identification	<p>There is a need to be able to uniquely identify each referral to a team/provider and for this referral ID to be present across all activity, issue/diagnosis, outcome measurement/collection and exit that relate to the referral.</p> <p>The reasons are:</p> <ul style="list-style-type: none"> <li>(a) Linking of all related information;</li> <li>(b) To ensure not duplicating the same referral/exit;</li> <li>(c) QA of process.</li> </ul> <p>There is a need to be able to track the progress of consumer, activity etc. against the original referral, through to any subsequent referral that might be generated from it.</p>	<p>The original referral ID must be present in a referral document and in all related data.</p> <p>The referral ID must be uniquely identifiable within New Zealand.</p>	<p>The systems within an organisation should be able to link an internal reference number to all associated activity.</p> <p>A new referral should be opened for each team that a consumer receives services from and each referral should be closed when the team is no longer providing services to a client.</p>
NHI	<p>NHI numbers for all consumers will be recorded.</p> <p>Where consumers have multiple NHI numbers, one number is to be identified as the “master” and this number should be the number used.</p>	<p>NHIs provide a method of uniquely identifying consumers.</p> <p>At various stages, multiple NHIs may exist for the one person. When this becomes known, one NHI will become the “master” according to rules set by the NZHIS.</p>	<p>Systems need to allow for NHIs to be “merged” and ensure that there are “roll back” procedures in place. Once NHIs have been merged, the consumer’s master NHI number should be viewable to users of the system.</p>
Referral information	<p>There is a need to record referral information promptly and accurately within an organisation.</p> <p>A referral is the “start point” of a consumer receiving healthcare from a particular team.</p>	<p>Referrals must include information on the referral source, the referral date and the organisation and team that the consumer was referred to.</p> <p>All referrals are to be submitted, even if the referral is declined. This is to ensure that unmet need can be measured. Where a referral is declined the Referral End Code would indicate why the referral was declined.</p>	<p>System validation should ensure that all referral information is complete and the information entered meets the required validity checks.</p>

General Area	Business Requirement	Business Rule	Implementation Guideline
Legal status	The legal status of a consumer needs to be known and understood by the team providing treatment.	A legal status record must be provided by the organisation that assigned that legal status to the consumer. When an organisation does not assign a consumer with a legal status no legal status record should be submitted.	System validation should ensure that all legal status is complete and the information entered meets the required validity checks.  Ideally system would incorporate messages to indicate the administrative and clinical requirements of the various acts.
Activity	In order for local, regional and national decision makers to make informed decisions regarding the provision of mental health and addiction services, there is a need for sound information on what is currently being provided.  If activity information is incomplete, and cannot be linked to clinical measures (diagnosis, treatment and outcomes), decisions makers will not be properly informed.	All activity provided to mental health and addiction consumers must be recorded and submitted to local and national systems.  All activity is to be linked to the referral identifier, to ensure that the information can be linked together correctly.	The systems within an organisation should be able to link all activity to a referral identifier.  The system shall allow start and end times to be recorded, as this will permit correct sequencing of activity and events.  All information entered relating to service and activity should be validated at point of entry for correctness and completeness.  Systems need to allow multiple activity records for consumers involved in day programme or group attendances.
Classification	In order to determine the need for provision of mental health and addiction services, it is important to understand the nature of conditions that are being treated.  Over time, there will in all likelihood be a shift in the nature of conditions that are presenting in mental illness. By ensuring that there is a robust mechanism for describing mental health related issues, trends can be monitored and appropriate actions, in both prevention and treatment areas, taken.	All mental health consumers of DHB provider arm teams are to be assessed and an issue/diagnosis documented within 91 days of the activity start date, or by the service end date (whichever of these time periods occurs first). Where NGOs are clinically determining diagnosis, they are responsible for providing details of that diagnosis.	Exit cannot be completed until diagnosis and/or issue is completed.  Issue/diagnosis must be a valid code and conform to coding standards.

General Area	Business Requirement	Business Rule	Implementation Guideline
Collection of outcome measures	<p>The sector has recognised a need to measure the effectiveness of service provision.</p> <p>In applying standard measures at the initial contact (entry), review (for enduring episodes) and on exit, a picture can be obtained of change in the consumer's well-being.</p>	<p>Outcome measures will be recorded according to the protocol for the appropriate collection instrument for the consumer.</p> <p>All outcome measures are to be linked to the referral identifier to ensure outcomes and activity information can be linked together correctly.</p>	<p>Outcome measures should be completed at entry/first contact, during reviews and prior to exit, where a measure is available.</p> <p>System is to ensure that appropriate prompts and validation are in place, so that collection protocols are complied with.</p>
Exit	<p>In order to end a referral, an referral_end record must be completed.</p> <p>Reason for exit (referral_end code) is recorded as part of QA procedures and to reach an understanding of the nature of exits.</p>	<p>Any referral that remains open with no activity for more than 91 days is to be reviewed.</p> <p>All referral end codes must be valid.</p> <p>A referral is deemed to be closed when an exit reason and exit date have been completed.</p> <p>The collection date is the reference date for all reports and statistical analyses of the data collected at any given collection occasion.</p>	<p>Reports should be available that highlight consumers with inactive referrals that are not exited.</p> <p>Report should be available highlighting any open referrals where the client is deceased.</p>

# APPENDIX A GLOSSARY OF TERMS

(Normative)

Term	Definition
Admission/Admitted	In the case of mental health and addiction, this does not mean the admission of a consumer to a facility. It is where a consumer is accepted for treatment by a service, either by way of an inpatient admission, or with outpatient services.
CLIC	Client Information Collection database.
Consumer	A person who accesses publicly funded healthcare. This person may be referred to elsewhere as a 'Healthcare User', 'Client' or 'Patient'.
CPN	Common Person Number.
DAMHS	Director of Area Mental Health Services.
Data Element	An atomic piece of data, e.g. first name, last name etc.
Data Group	Group of data elements of related data, e.g. consumer identification, demographic data.
Data Set	Collection of data groups, used for specific purposes, e.g. referral data set, exit data set.
Data Source	An organisation (usually) or authorised person that supplies data about a practitioner, health worker, organisation or facility to the HPI.
DHB	District Health Board.
Exit	The relinquishing of consumer care/support in whole or in part by a healthcare provider or organisation. There are two common types of exit: <ul style="list-style-type: none"> <li>(a) administrative;</li> <li>(b) clinical exit.</li> </ul> <p>In other settings, 'Exit' may be referred to as 'Discharge'.</p>
Exit Referral	A referral occurring in the context of exit and comprising a referral with an attached exit summary.
Exit Summary	A collection of information, reported by a provider or organisation, about events at the point of exit.
Facility	A single physical location from which health goods and/or services are provided.
Health Practitioner Index (HPI)	A centrally managed utility that is used to collect and distribute practitioner, health worker, organisation and facility data. The HPI will facilitate the timely and secure exchange of health information, ensure the accurate and unique identification of practitioners, health workers, organisations and facilities and offer operational support for health organisations that use that data and provide information of interest to the public. Data is supplied by authorised data sources and distributed to authorised consumers. The Ministry of Health (as the HPI Administrator) manages the HPI.
Health Professional	A person who is, or is deemed to be, registered with an authority established or continued by section 114 of the HPCA Act 2003, as a practitioner of a particular health profession.
Health Worker	A person not registered with a responsible authority who works within the health sector.
Healthcare Provider	A person or organisation that provides consumer health care services.
Healthcare User	A person who accesses publicly funded healthcare, this person may also be referred to as a 'Consumer', 'Client' or 'Patient'.

Term	Definition
HoNOS	Health of the Nation Outcome Scales.
HoNOS - LD	Health of the Nation Outcome Scales – Learning Disabilities.
HoNOS - Secure	Health of the Nation Outcome Scales for users of secure services.
HoNOS65+	Health of the Nation Outcome Scales (for those over 65 years).
HoNOSCA	Health of the Nation Outcome Scales for Children and Adolescents.
HPI Administrator	The administrative staff – employed by the MoH – who authorise and maintain data about organisations; and monitor the data quality and consistency in the HPI (this includes practitioner, health worker, organisation, and facility uniqueness).
KPI Project	A Key Performance Indicator Framework for New Zealand Mental Health and Addiction Services
MHINC	Mental Health Information National Collection.
MH-SMART	Mental Health – Standard Measures of Assessment and Recovery
NGO	Non Government Organisation.
NZHIS	New Zealand Health Information Service.
Organisation	An entity that provides services of interest to, or is involved in, the business of healthcare service provision. There may be a hierarchical (parent-child) relationship between organisations.
Patient	A person who accesses publicly funded healthcare, this person may also be referred to as a healthcare user, consumer, or client.
Person	An individual person who can assume multiple roles over time. In the HPI, 'person' is synonymous with practitioner, health worker, and user.
PHO	Primary Healthcare Organisation.
Practising Certificate	A practising certificate issued by the relevant authority (Responsible Authority) under section 26(3) or section 29(4), or deemed to have been issued under section 191(2), of the Health Practitioners Competence Assurance Act 2003. This may be issued annually or for a shorter interim period.
Practitioner	A person who is, or is deemed to be, or has been registered with, a Responsible Authority as a practitioner of a particular health profession under the HPCA Act 2003.
PRIMHED	Project for the Integration of Mental Health Data
Privacy	The right of an individual to control access to and distribution of, information about themselves.
Referral	<p>Referral may take several forms, most notably:</p> <ul style="list-style-type: none"> <li>(c) request for management of a problem or provision of a service, e.g. a request for an investigation, intervention or treatment;</li> <li>(d) notification of a problem with the hope, expectation or imposition of its management, e.g. an exit summary in a setting, which imposes care/support responsibility on the recipient.</li> </ul> <p>The common factor in all referrals is a communication whose intent is the transfer of care/support, in part or in whole.</p>
Referred To Healthcare Provider	The healthcare team/provider to which a consumer has been referred for advice or treatment by a referring healthcare provider. The 'Referred To





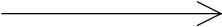

Term	Definition
	Healthcare Provider' may be an individual or facility.
Referring Healthcare Provider	The healthcare team/provider that is referring the consumer for advice or treatment. The referring team/provider generally has primary care responsibilities for the consumer. Typically, the referring team/provider will be a General Practitioner, but may be referred to healthcare team/provider (see Referring Specialist).
Referring Specialist	A 'Referred To Healthcare Provider' who is referring a consumer for advice or treatment, but not back into the care/support of the 'Referring Healthcare Provider'.
Relationship	The HPI will be able to record one or more relationships between practitioner, health worker, organisation and facility records.
Service Provider	Any service that provides mental health and addiction services, including, but not limited to: NGOs; DHB Provider Arms; PCP: PHOs; other community agencies.
Specialist	See 'Referred To Healthcare Provider' and 'Referring Healthcare Provider', above. In the context of referrals, clinical status reports and exit summaries, a specialist is an individual, not a facility.
Team	A team consisting of a person or functionally discrete grouping of people providing mental health and addiction services within a service provider.

## APPENDIX B STATE DIAGRAM NOTATION

### (Informative)

The state diagrams shown in the PRIMHED standard documents derive diagramming conventions from the Unified Modelling Language (UML) 2.0. The diagram notation used is illustrated below.

The intent of this appendix is simply to promote the readability of the diagrams without requiring any depth of knowledge of the UML by a reviewer. The interpretations below therefore do not pretend to represent exactly the technical definitions of the relevant diagram component in the UML, but are considered sufficient for the purpose of reading this standard.

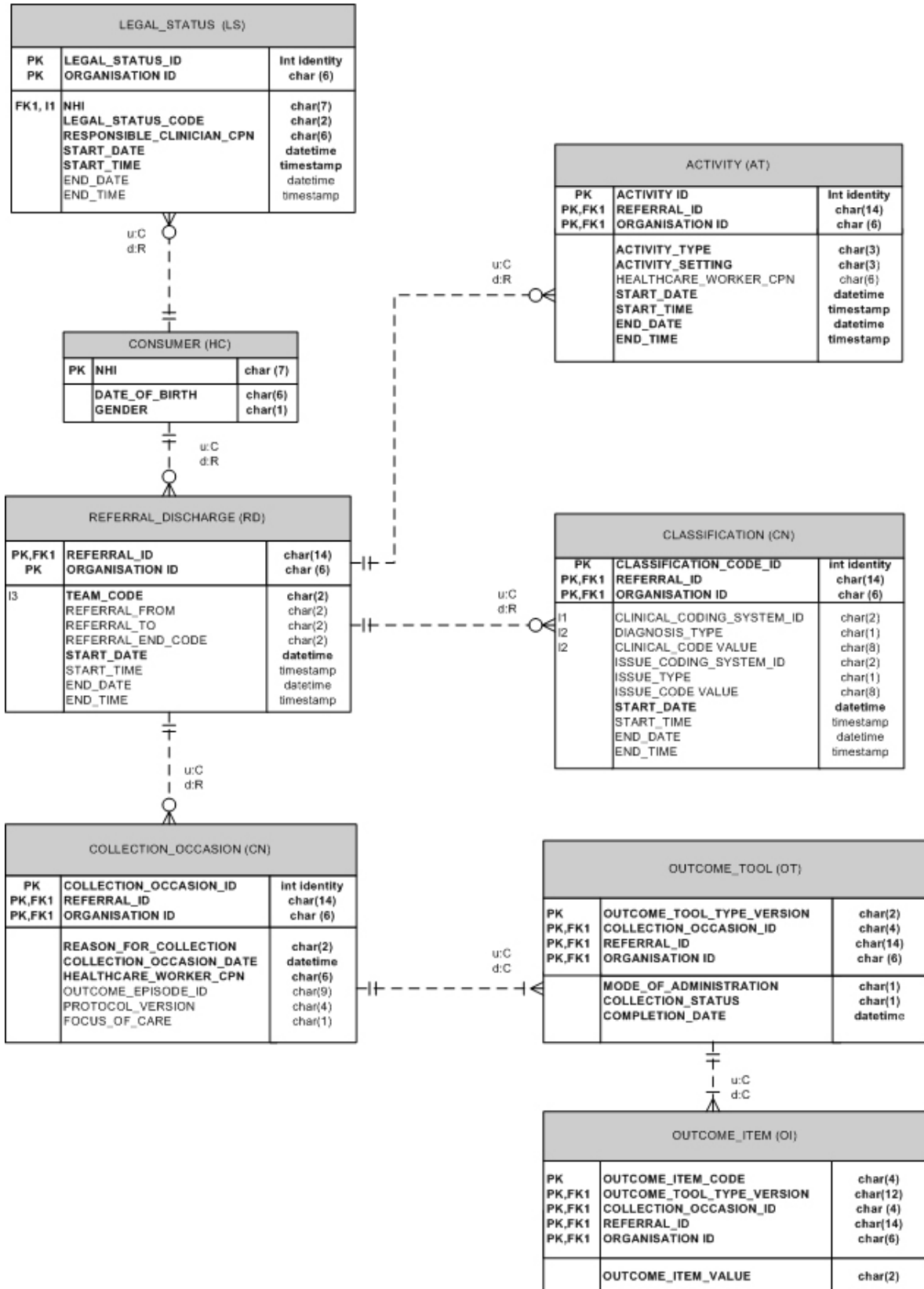
Diagram Notation	Notation Name	Interpretation
	Initial State	The initial state when the diagram process is entered, before any of the events that occur within the diagram have occurred to alter this initial state.
	Simple State	The point at which an object, used within the process represented by the diagram, satisfies a condition, performs an action, or waits for an event. A state is an image of an instant in the life of an object in the process.
	Composite State	A composite state is a state that has been devolved into a finer granularity of states as a sub-diagram.  Composite states can represent “concurrent state requirements” (can be interpreted in the sub-diagram as a “this state AND that state” situation) or as “mutually exclusive state requirements” (can be thought of as “this state OR that state”). In the PRIMHED standard, all composite states illustrated are of the “OR” type.
	Transition	A transition is the process that acts upon one state to transform it into a subsequent state.
	Event Annotated Transition	The annotations shown on a transition are the event conditions.  The event is shown as “{Event that occurs}” and indicates the process that is required to happen as a precursor to making a transition possible. Numbers are for identification only and do not indicate event order or sequence.
	Final State	The final state is simply the resultant state at the termination of the current process shown in the diagram. It does not necessarily represent the end-state of the total process.

# APPENDIX C BACKGROUND DATA MODEL

## (Informative)

The model below is not a design for the database. Further work is required to specify a final encompassing national collection data schema.

The NHI number for the consumer will accompany each record submitted to the national collection.



The background data model presented above does not purport to be the totality of data recorded or stored in the PRIMHED collection or purport to be a full and final data model. Instead, it is intended to show the core data elements and relationships that are significant to the formative thinking in the development of this standard. This may be thought of as being analogous to the “minimum” data set that must be provided to the PRIMHED national collection, though it is obvious from the model that a number of elements critical to reporting from the national collection are not shown, such as all of the lookup code set data, mental health team elements and the majority of NHI data. These other data structures and elements are managed by the NZHIS as separate processes to data that are sent to the PRIMHED national collection by mental health service provider organisations.

The purpose in representing the background data model in this way is to:

- (a) clarify the “key” data critically necessary in the PRIMHED national collection in order to create a cohesive integration of MHINC and MH-SMART data from all sources;
- (b) abstract the PRIMHED core data from other collections, such as the NHI, that are necessary for the completeness of the PRIMHED national collection, but do not require explanation here;
- (c) generalise the PRIMHED data elements’ names and key relationships from previous collections or sources (notably MHINC), to create a more flexible and generic structure and a nomenclature that is more inclusive of the broad base of organisations across the sector that PRIMHED will involve.

This background data model also does not purport to indicate all of the data elements contained in the PRIMHED data set standard. The data elements shown in the background data model are a subset of the complete data set. The PRIMHED national collection will include elements that are derived by their relationship to the core data. An example of such derived data is the ‘Facility Code’: a facility is closely related to a team, and because PRIMHED will include an extended and more comprehensive and detailed list of team codes, the ‘Facility Code’ can be readily obtained with just the team code data being provided via mental health service provider data extracts.

The background data model therefore does indicate the majority of significant data elements that will be provided to the collection by reporting organisations.

# APPENDIX D      ESSENTIAL DATA RELATIONSHIPS

## (Normative)

The essential data relationships on which the PRIMHED standards are based are as follows:

- (a) legal status is related to a consumer rather than a provider or referral (a legal status can span a number of referrals from provider to provider);
- (b) involvement of any team (DHB community/inpatient, NGO community/residential) begins with a referral and ends with an exit;

***Note:** It is desirable to identify all services provided following a single referral into DHB-funded services (e.g. referral by a clinical team for Alcohol and Other Drug (AOD) treatment or community support.*

- (c) it is important to link issues/diagnoses to different activities and outcomes. Different teams may provide different activities, which are required for different issues/diagnoses. To ensure activities and outcomes link to a particular referral and team, these must be linked to the classification. This will enable multiple different issues/diagnoses to be managed at the same time by different teams;
- (d) for the same reason, outcome measurement is linked to referral. This will allow different outcome measures to be collected by different teams for the same person (e.g. NGO measures, addiction measures, HoNOS, etc.)

# APPENDIX E DATA MAPPINGS

## (Informative)

To assist further understanding of the background data model in Appendix C and how MHINC and MH-SMART contribute to the PRIMHED national collection, a data mapping table is presented below. Data elements are grouped according to the background data model tables and these groupings are alternately background-coloured white or light blue for clarity. Note that where primary key data fields are indicated in this table, no definitions of these data are shown (the mapping table cells are greyed).

PRIMHED Background Data Model Table	PRIMHED Data Name	Definition	Plain English Definition	Name if in MHINC	Name if in MH-SMART
<b>Legal Status</b>	Legal Status ID				
	Organisation Code		A code that uniquely identifies an organisation.	Agency Code	Agency Code
	NHI	A unique identifier for all New Zealand that takes precedence over all other identifiers.		HCU ID	NHI
	Legal Status Code	Code describing a client's legal status under the appropriate section of the Mental Health (Compulsory Assessment and Treatment) Act 1992, the Alcoholism and Drug Addiction Act 1966, the Intellectual Disability (Compulsory Care and Rehabilitation) Act, or the Criminal Procedure (Mentally Impaired Persons) Act 2003.		Legal Status Code	MH Legal Status Identifier (voluntary or involuntary status)
	Responsible Clinician CPN	A unique lifetime identifier for an individual, which takes precedence over all other identifiers (practitioner and health worker) across the HPI.			Responsible Staff Member ID
	Start Date	The date the legal status came into effect.		Legal Status Date	Collection Occasion Date
	Start Time	The time the legal status came into effect.			
	End Date	The date the legal status code ceased to apply, or the client is exited (if voluntary code) from the service.			
	End Time	The time the legal status code ceased to apply, or the client is exited (if voluntary code) from the service.			
<b>Consumer</b>	NHI	A unique identifier for all New Zealand that takes precedence over all other identifiers.		HCU ID	NHI
<b>Activity</b>	Activity ID				

PRIMED Background Data Model Table	PRIMED Data Name	Definition	Plain English Definition	Name if in MHINC	Name if in MH-SMART
	Referral ID				
	Organisation Code			Agency Code	
	Activity Code	A code that identifies the activity. An activity is the type of mental healthcare the consumer receives.	The intent of this definition data type is to record the specific activity provided.	Service Code	
	Activity Type	A code that classifies the type of healthcare activity provided to the consumer.			
	Activity Setting	This indicates the type of physical setting or contact channel that the activity was provided in.		Service Setting	
	Healthcare Worker CPN	A unique lifetime identifier for an individual which takes precedence over all other identifiers (practitioner and health worker) across the HPI.			Staff ID
	Start Date	The date the consumer commenced accessing this mental health activity.		Reporting Period Start Date	Collection Occasion Date
	Start Time	The time the consumer commenced accessing this mental health activity.			
	End Date	The date the consumer ceased receiving this mental health activity.		Reporting Period End Date	
	End Time	The time the consumer ceased receiving this mental health activity.			
<b>Classification</b>	Classification Code ID				
	Referral ID				
	Organisation Code			Agency Code	Agency Code
	Clinical Coding System ID	A code identifying the clinical coding system used for diagnosis and procedures.		Clinical Coding System ID	Diagnosis Coding System
	Diagnosis Type	A code that groups clinical codes or indicates the priority of a diagnosis.		Diagnosis Type	Diagnosis Type
	Clinical Code Value	A code used to classify the condition or issue.		Clinical Code	Diagnosis Code
	Issue Coding System ID	A code indicating the issue coding system(s) being used.			
	Issue Type	A code that groups issue codes or indicates the priority of an issue.			
	Issue Code Value	A code used to classify the condition or issue.			

PRIMHED Background Data Model Table	PRIMHED Data Name	Definition	Plain English Definition	Name if in MHINC	Name if in MH-SMART
	Start Date	The date the clinical condition or issue was identified.		Diagnosis Date	Collection Occasion Date
	Start Time	The time the clinical condition or issue was identified.			
	End Date	The date the clinical condition or issue ceased to apply.			
	End Time	The time the clinical condition or issue ceased to apply.			
<b>Referral</b>	Referral ID		Unique identifier for each referral.		
	NHI			HCU ID	NHI
	Organisation Code			Agency Code	Agency Code
	Team Code	A code which uniquely identifies a healthcare team. A person or functionally discrete grouping of people based in a particular location providing mental healthcare to a client group in either an inpatient or community setting. Uniquely linked to health agency.		Team Code	Team Code
	Referral From	The source from where the healthcare user, consumer, or recipient was referred for the beginning of this episode of care.		Referral Source/ Destination	
	Referral To	The destination to where the healthcare user, consumer, or recipient was referred when discharged from this episode of care.		Referral Source/ Destination	
	Referral End Code	A code that describes why consumer was exited from the healthcare team.		Discharge Type	Reason for Collection (Discharge)
	Start Date	The date that the referral was received.		Service Start Date	Admission Date (outcomes episode level)
	Start Time	The time that the referral was received.			
	End Date	The date that all contact between the consumer and the mental healthcare team ends.		Service End Date	Discharge Date (outcomes episode level)
	End Time	The time that all contact between the consumer and the mental healthcare team ends.			
<b>Collection Occasion</b>	Collection Occasion ID		Unique identifier for each collection occasion.		Collection ID
	NHI				NHI
	Referral ID				
	Organisation Code				Agency Code
	Reason For Collection	The reason for the collection of the standard measures and individual data items on the identified collection occasion.			Reason for Collection
	Collection Occasion Date	The date on which the collection of the outcome measure(s) was commenced.			Collection Occasion Date

PRIMHED Background Data Model Table	PRIMHED Data Name	Definition	Plain English Definition	Name if in MHINC	Name if in MH-SMART
	Healthcare Worker CPN	A unique lifetime identifier for an individual which takes precedence over all other identifiers (practitioner and health worker) across the HPI.			Staff ID
	Protocol Version	The version of the information collection protocol under which the data has been collected and submitted.			Protocol Version
	Focus of Care	The focus of care identifies the principal clinical intent of the care provided during the period of care preceding the collection occasion. It is a global clinical judgement based on the intensity and purpose of the services provided during the period of care.			Focus of Care
	Outcome Episode ID	Unique identifier for each outcomes episode at organisation level.	Unique identifier that links collection occasions (entry, review(s), discharge) within one outcomes episode.		Episode ID
<b>Outcome Tool</b>	Outcome Tool Type and Version	A code that identifies the outcome tool, and the version of that tool, which is used for a particular outcome collection.	Encoded value encapsulating the type and collection protocol version of outcome measure or other instrument collected, e.g. HoNOS v2.4, HoNOSCA v2.4.		Outcome Measure + Protocol Version
	Collection ID				Collection ID
	NHI				NHI
	Referral ID				
	Organisation Code				Agency Code
	Mode Of Administration	The procedure or method used in the ascertainment and recording of the standard measure.	Completed following clinical assessment; self-report completed by consumer using computer based format.		Mode of Administration
	Collection Status	The completion status of the data recorded and, if missing data is recorded, the reason for the non-completion of the measure.			Collection Status
	Completion Date	The date of completion of the outcome measure collection.			Completion Date
<b>Outcome Item</b>	Outcome Item Code		The unique identifier for the item being rated in the outcome tool.		Outcome Item
	Outcome Tool Type Version				Tool Type + Protocol Version
	Collection ID				Collection ID
	NHI				NHI

PRIMHED Background Data Model Table	PRIMHED Data Name	Definition	Plain English Definition	Name if in MHINC	Name if in MH-SMART
	Referral ID				
	Organisation Code				Agency Code
	Outcome Item Value	The value given to a particular outcome item code.	For example, in HoNOS this is the rating given against each of the 12 items.		Outcome Score

## APPENDIX F DATA MODEL NOTATION

### (Informative)

Similarly to the state diagram notation provided above, this notation explanation is provided in an attempt to promote readability and use of the standard without necessity for technical knowledge of the area. The notation explanations therefore do not purport to be formally correct data modelling definitions, but are rather intended as a “plain English” description.

The diagram notation used in the example background data model uses MS SQL server physical data types. The following are descriptions of the elements:

- (a) The left hand table column indicates keys and indexes:
  - PK=Primary Key;
  - FK(digit)=Foreign Key;
  - I(digit)=Non-unique Index ;
  - U(digit)=Unique Index.
- (b) In all cases, when a key or index label is followed by a digit, like digits indicate that the item is one member of a group comprised of all key or index fields with that digit. Dissimilar digits indicate singleton key or index fields:
  - For example, ‘NHI’ in the ‘Legal\_Status’ table is labelled as ‘11’ and there are no other ‘11’ labelled fields in that table. It is therefore a singleton non-uniquely indexed field. It is non-unique because the same NHI may occur more than once in the database.
  - In contrast, the ‘Code\_Type’ and ‘Code\_Value’ fields of the coding table are both labelled as ‘12’, indicating that they are members of a non-uniquely indexed group of fields. They are non-unique because it is possible for the same ‘Code\_Type’ and ‘Code\_Value’ combination to occur more than once across the entire database.
- (c) “Crow’s foot” lines indicate between-table relationships:
  - Solid crow’s-foot relationship lines indicate “identifying” table relationships, i.e. the relationship can be found to either table from the other table by following the primary keys (or parts thereof).
  - Dashed crow’s-foot relationship lines indicate “non-identifying” table relationships, i.e. the relationship from parent table to child table can be found by following primary key values, but the reverse is not true.
  - The ‘o’ end of the relationship line indicates an optional relationship (read as e.g. “Consumer may have zero, one or more Legal\_Status”).
  - The single ‘|’ across the relationship line indicates a mandatory relationship with at least 1 record required in the child table direction (read as e.g. “Outcome must have one or more Outcome\_Measure”).
  - The double ‘||’ across the relationship line indicates a mandatory relationship with exactly 1 record required in the parent table direction (read as e.g. “Classification must have one and only one Referral”).
- (d) Bold field labels indicate that field is mandatory.

# APPENDIX G EPISODE OF CARE (MH-SMART)

## (Informative)

### Preamble

The following discussion on Episodes of Care is extracted from the MH-SMART Information Collection Protocol. It is included here for information and reference, as it has influenced the thinking on principles, processes and structures for PRIMHED.

### Episode of Care<sup>2</sup>

The general concept of an episode as a more or less continuous period of care provided by an identified service provider for an identified consumer is well understood and used in clinical practice. However, that informal clinical concept of an episode is not sufficiently well-defined to be used as the basis for the specification of an information collection protocol. In acute inpatient settings, the definition of an episode of care is relatively straightforward. However, in community care settings there is no generally agreed definition of an episode of care. This raises significant problems in the specification of an information collection protocol, as it means that the key events marking the start and end of such episodes - admission and discharge - are not well defined.

Moreover, most mental health and addiction services make available a complex array of interlocking services, provided by a number of service teams, including inpatient units, outpatient services (both hospital and community-based) and mobile acute assessment and treatment services. The clinical pathways between these various service teams or teams are often complex. A consumer may sometimes be transferred between inpatient facilities, depending on the intensity of care they require. A consumer may often receive care from more than one service team at a time, or a second service team may provide more intensive care for several weeks.

#### DEFINITIONS:

**Mental Health Services Setting:**

The setting within which the episode of mental health care takes place, either an inpatient psychiatric care or community mental health care service setting.

**Episode of Care:** A more or less continuous period of contact between a consumer and a contracted DHB mental health service that occurs within one mental health service setting.

**Collection Occasion:** An occasion during an episode of care when standard measures and other data items are collected in accordance with the standard Information Collection Protocol as part of the clinical care process.

**Period of Care:** is the interval within an episode of care between one collection occasion and the next.

There is a need to establish a formal definition of an episode of care that unambiguously identifies when admission and discharge from the defined episode occurs, for the purposes of facilitating the specification and implementation of the Information Collection Protocol. This formal concept of an episode must not be confused with either the clinical concept of an episode of care or the more narrowly defined concept of an episode of care given in the MHINC Dictionary.

For the purposes of these requirements, an Episode of Care is defined as:

*A more-or-less continuous period of contact between a consumer/tangata whaiora and a contracted DHB mental health and addiction service that occurs in either an inpatient psychiatric care or community mental health and addiction care service setting.*

- (a) A patient may only be the subject of one episode of care at any given point in time. Where a patient is being treated in two settings simultaneously the following order of precedence applies: inpatient first, community mental health and addiction care second.

A new episode of care is initiated when a client is admitted into either an inpatient psychiatric setting or a community mental health and addiction service setting, or transferred between them.

The consumer/tangata whaiora is defined as having been discharged from an episode of care either when they are fully

discharged from a mental health and addiction service setting, or when they are transferred into a different mental health and addiction service setting.

<sup>2</sup> MHRD NZ Mental Health Standard measures of Assessment and Recovery (MH-SMART) Initiative – Information Collection Protocol v1.1, 2006.

Except under certain specified circumstances, the transfer of the client between service teams within the same mental health and addiction service setting and mental health and addiction service does not require the closure of one and opening of another episode of care<sup>3</sup>.

### *Episodes of Overnight Inpatient Care*

The definition of an episode of overnight inpatient care is generally straightforward. The episode begins when the patient is admitted to a psychiatric hospital or unit and ends when they are discharged from the psychiatric hospital or unit.

For the purposes of information collection, the formal definition of an episode of inpatient care excludes transfers within the same facility from acute to step-down or rehabilitation inpatient unit as a reason for the end of an episode of care. Such transfers may be seen as a reason for the completion of a review. However, the transfer of the client to a different psychiatric hospital is to be treated as a new episode of care, even though this is in the same DHB.

The identification of episodes of inpatient care can be complicated by the occurrence of periods of leave. Clinically, a consumer/tangata whaiora is not considered to have completed an episode of care when they are granted short periods of leave, i.e. periods of less than seven days. Administratively, the client may be statistically separated for the duration of the leave period, then re-admitted. Thus, the statistical record for patients with one or more periods of leave may consist of two or more episode records. Analytically, these separate episode records are merged, with the leave periods being excluded in any determination of the number of days of care. However, where a period of leave exceeds seven days, the subsequent admission is defined as an admission to a completely new episode of care.

Discharge on trial leave poses particular problems. In this case, the client is discharged into community care with an expectation that, if adequate support is available, they are not likely to require further inpatient care. However, that expectation is conditional, there also being an expectation that the patient may need to be re-admitted within a short time.

For the purposes of data collection, the end of an episode of care in an inpatient psychiatric care setting will be defined as the day when the person is discharged or sent on leave from the facility, without there being any plan for their re-admission within the next 7 days.

### *Episodes of Community Care*

The definition of episodes of community care is more complex. Community care may be provided via a range of approaches. A consumer/tangata whaiora may be admitted to a hospital as a same-day patient, they may visit a hospital or community centre as an outpatient, or a clinician may visit the person in their home. Each of these different kinds of contacts may or may not be part of a clinically coherent episode of care. The implication of this variation in the pattern of contact is that the identification of the end of an episode of community care may not be straightforward.

For the purposes of this Information Collection Protocol, it has been agreed that, as with episodes of overnight inpatient care where leave periods exceeding seven days represent a definite clinical and statistical boundary between two episodes of care, a similar approach will be taken for the definition of episodes of community care.

Specifically, it is recommended that if a consumer/tangata whaiora has had no community care contacts for a period of 13 weeks or more, then the last contact before that interval should be considered to be the date of separation from the episode of community care, after appropriate steps have been taken to re-establish contact. Similarly, if there is no plan for a consumer/tangata whaiora to be seen for that whole interval, then it can reasonably be concluded that they are not in active care. The period of 13 weeks is chosen because it explicitly represents the standard interval of three months between reviews recommended in the Information Collection Protocol.

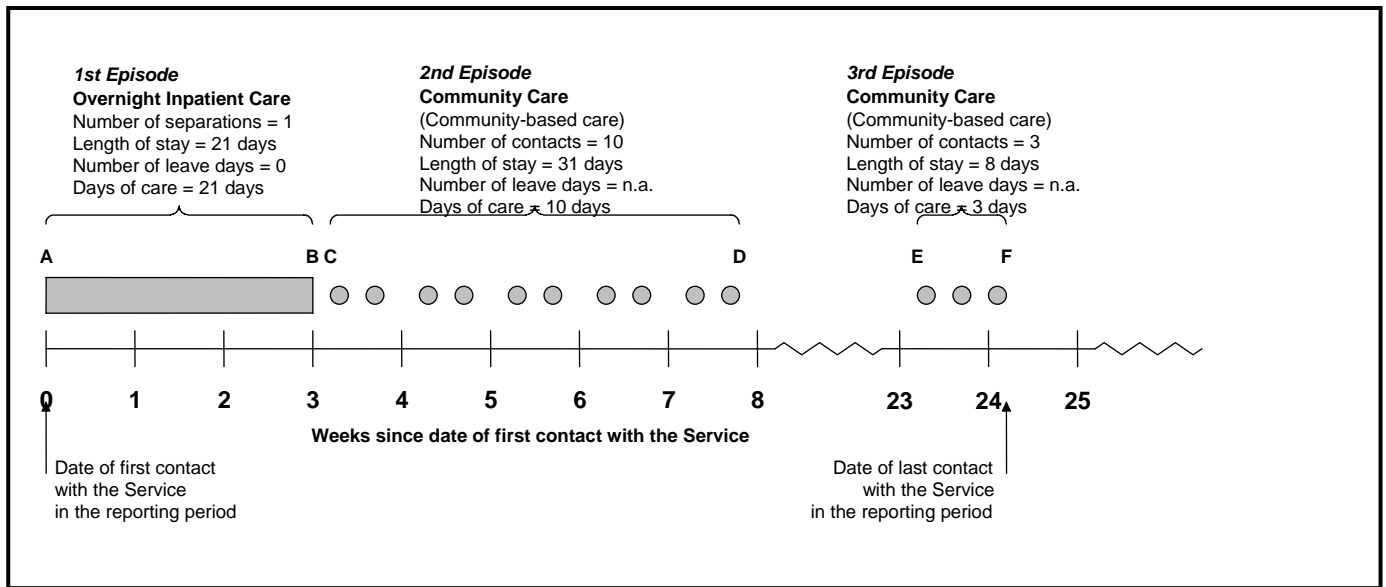
<sup>3</sup> One exception occurs when an admitted patient in a general hospital psychiatric unit is transferred into an acute unit in a stand-alone psychiatric hospital located within the same DHB. A second exception is the transfer between an NGO provider and a public mental health service. Although strictly it could be argued that the patient was being treated in the same mental health service setting, the change of establishment and associated clinical processes mean that in practice such transfers are better treated as new episodes of care. As the unit of statistical analysis is the period of care, this should make no real difference to reported analyses of outcomes data.

Therefore, if the staff member responsible has a contact with a consumer/tangata whaiora and there are no plans to have further contact within 13 weeks the current contact is deemed to be the “discharge” contact. A ‘discharge from community care outcomes information collection’ would thus be required.

A consumer/tangata whaiora in community care may require admission for overnight inpatient care. Clinically, it is usually desirable that there be a genuine continuation of care from the preceding period of community care, through the inpatient admission, into the subsequent period of community care. Statistically, it is necessary to stipulate that a client may only be the subject of a single episode of care at any given time. Therefore, when a consumer/tangata whaiora in community care is admitted into overnight inpatient care, they must be discharged (at least statistically) from the episode of community care. Following their discharge from overnight inpatient care, the consumer/tangata whaiora would usually return to community care. This must be identified as a new episode of community care, with the date of admission into that episode being the date of first contact for community care following discharge from overnight inpatient care.

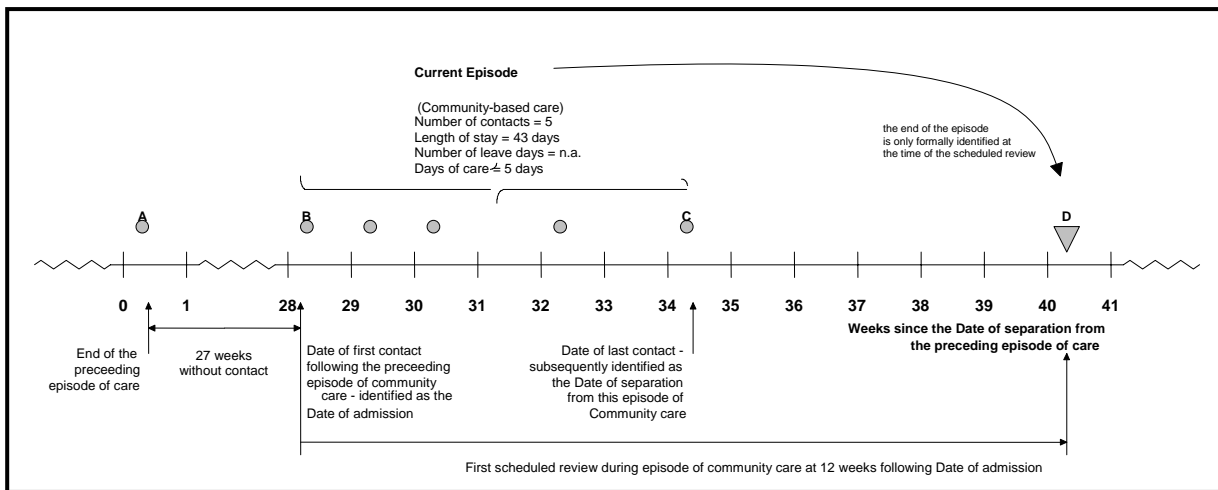
**Examples**

These rules for the identification of the beginning and end of episodes of care are illustrated in Figure 4 and Figure 5.



**Figure 4 – Defining the beginning and end of sequential episodes of care**

In the example shown in Figure 4, the person is admitted into hospital, transferred into community-based care and then discharged to their own care. Then, some time later, they make contact with the community-based service for a short period. In those cases where a client is formally discharged from a community-based mental health and addiction service’s care, the identification of the end of the episode of care is straightforward. The identification of the second episode of care represents this simple scenario.



**Figure 5 – Defining the end of a brief Episode of Community Care.**

In the example shown in Figure 5, the person makes contact with the service (point B at week 28) during a period of acute distress and is seen on several occasions over a period of several weeks (until point C at week 34). Their contact with the service in week 28 (at point B) would be identified as the beginning of a new episode of care and if there was an expectation that contact would be maintained for more than a few weeks, a review would be scheduled for 13 weeks hence (at point D during week 41). However, after several weeks the client makes no further contact with the service. In this case the contact at point C becomes the identified date of separation.

As can be seen from these two examples, in those cases where it is not certain whether the client will make further contact with the service, the determination that the episode of care has ended is based on the judgment that no further contact with the client is likely to occur within three months of the date of last contact.

# APPENDIX H BIBLIOGRAPHY

## (Normative)

Details of established data definitions or guidelines for data elements that have been cited in this standard are:

**AS/NZS 7799.2:2000 Information security management, Part 2: Specification for information security management systems.** This standard forms the basis for an assessment of the information security information management systems (ISMS) of a whole, or part, of an organisation. It may be used as a basis for formal certification. This standard was formerly known as AS 4444.2:2000. AS/NZS 7799 should be read in conjunction with AS/NZS ISO/IEC 17799.

**AS/NZS ISO/IEC 17799:2001 Information technology - Code of practice for information security management.** This provides recommendations for information security management for use by those who are responsible for initiating, implementing or maintaining security in their organisation. It is helpful in developing organisational security standards and effective security management practice.

**HDZ 10011/PPC Referrals, Status and Discharge Business Process Standard (Pre Public Comment Draft).** This provides guidance on business processes relating to a consumer's passage through the health sector.

**HDZ 10005/PPC and HDZ 10006/PPC Health Practitioners Index Data and Code Sets Standard (Pre Public Comment Draft).** This also provides guidance on business processes relating to a consumer's passage through the health sector.

**Health Level Seven (HL7).** This is an international health data messaging standard, published by Health Level Seven Inc. (Ann Arbor, USA). The standard provides guidance for data exchange formats and unification of software interfaces for administrative and clinical data. AS 4700 provides an Implementation Standard for Australia for this international HL7 Standard. See also Section 4 – Messaging and [www.hl7.org](http://www.hl7.org)

**MHRD New Zealand Mental Health Standards and Measures of Assessment and Recovery (MH-SMART) Initiative – Information Collection Protocol v1.1.** This provides business rules and protocols that were developed as part of the MH-SMART project.

**Integrated Mental Health Data Collection Business Case – Summary Report.** “Feasibility study for determining whether MHINC and MH-SMART national collections should be integrated”, v3.0, 21 June 2006, HealthMAP.

**New Zealand Privacy Commissioner Web Site** [www.privacy.org.nz](http://www.privacy.org.nz) details current Commonwealth privacy legislation, regulations, codes, principles, and other privacy information/links relevant for New Zealand, for both the public and private sectors.

**NZHS Mental Health Information National Collection Data Dictionary (version 3.8) July 2006.** This provides the business and data element rules for the current MHINC system.

**Statistics New Zealand Country Code List (NZSCC99).** This lists and identifies all countries using a four digit number.