Use of Healthcare Identifiers in Health Software Systems

Software Conformance Requirements

Version 1.4 — 3/05/2011

Final

National E-Health Transition Authority Ltd
Level 25
56 Pitt Street
Sydney, NSW, 2000
Australia.
www.nehta.gov.au

Document version control

Version control

Date	Version	Comments
11/3/2011	1.0.0	Released for public comment
31/3/2011	1.1	Final version, incorporating public comments
05/4/2011	1.1.2	Corrections and additional text requested by Standards Australia.
08/4/2011	1.2	Incorporated changes requested by eHealth CCA Governance Group members.
11/4/2011	1.2.1	Incorporated feedback from Standards Australia
14/4/2011	1.2.2	Included clarifications prior to Governance Group acceptance
15/4/2011	1.3	Incorporated further changes following an HI working group teleconference
18/4/2011	1.3.1	Removed an invalid reference to a Medicare technical document
21/4/2011	1.3.2	Version issued to the eHealth CCA
3/5/2011	1.4	Incorporated corrections requested by Medicare Australia.

Table of contents

1 Preface

1.1 Document purpose

This document lists mandatory, conditional and recommended software conformance requirements applicable to the HI implementation of business use cases as listed in Appendix A for the use of Healthcare Identifiers in health software systems. These requirements are to be applied by the developers of such systems so healthcare identifiers are used in a manner that minimises risks to clinical safety, privacy and information security and maximises the benefits associated with their usage.

1.2 Intended audience

The intended audience includes:

- Solution architects, business analysts and software designers: To understand the service specifications to incorporate them into their designs;
- Developers: To implement the design so that it conforms to the service specifications; Developers may include both vendors and health jurisdictions and
- Testers: To evaluate whether an HI implementation conforms to the service.

1.3 Related documents

The following documents are at various stages of development and will be published along with the HI software conformance requirements, it is anticipated the guidelines for use of the HI will inform some business processes regarding the use of HIs. This document is concerned with how the software is configured to use healthcare identifiers:

- HI Business Use Cases – business use cases for the use of healthcare identifiers by health software systems [NEHTA2011a];
- Guidelines for use of healthcare identifiers - Under development;
- HI Conformance Assessment Scheme [NEHTA2011b]; and
- HI Conformance Test Cases [NEHTA2011c].

1.4 Development of these requirements

This version of the HI software conformance requirements has been developed in a series of workshops of the Healthcare Identifiers working group commencing in late 2010. This was initiated in response to the need to assure the clinically safe use of the national healthcare identifiers.

The publication of this document is overseen by the eHealth Compliance, Conformance and Accreditation (CCA) Governance Group which has a representative of the following bodies. Medicare Australia, the Department of Health and Ageing, the Medical Software Industry Association (MSIA), Australian Information Industry Association (AIIA) and Aged Care IT Vendors Association (ACIVA), National Association of Testing Authorities (NATA), NEHTA and Standards Australia.

1.5 Acknowledgements

Contributions to this document is acknowledged by NEHTA. Members of the healthcare identifiers working group include Medicare Australia, Department of Health and Ageing, Medical Software Industry Association, Australian Information Industry Association, Aged Care IT Vendors Association, Tasmanian Department of Health and Human Services, Victorian Department of Health, Victorian Royal Women's Hospital, ACT Department of Health and NT Department of Health. Contributors during the public comment period include other health jurisdictions, vendors and government authorities.

1.6 Questions and feedback

Any comments or feedback should be sent to the NEHTA Compliance, Conformance and Accreditation unit (CCA): **cca@nehta.gov.au**.

2 Scope and General

2.1 Scope

This software conformance requirements specification has been developed to support the safe use of healthcare identifiers in health software systems. The conformance requirements listed in this document apply to one or more business use cases, where each business use case describes a scenario in which healthcare identifiers are used.

Correct handling of healthcare identifiers by health software systems will assist in the reduction of errors and increase efficiency in managing patient information, potentially leading to improvements in the quality of patient healthcare.

The scope of this phase of the HI software conformance requirements does not include use of healthcare identifiers in messaging.

A second phase of development of the HI software conformance requirements will include the following items:

1. Conformance requirements for sending and receiving patient health information in electronic messages;
2. Possible conformance requirements associated with other types of healthcare identifiers including HPI-Is, HPI-Os and contracted service providers;
3. Further development of the process of merging, unmerging and splitting patient records;
4. Processes for the identification of duplicates and replicas (suggested by Standards Australia);
5. Inclusion of requirements in the Australian and international standards for healthcare identifiers for healthcare recipients and providers replicas (suggested by Standards Australia);
6. More development of conformance requirements for the use of provisional and unverified IHIs; and
7. Further development of requirement 6119 to cater for IHI of other statuses (not just ‘active’).

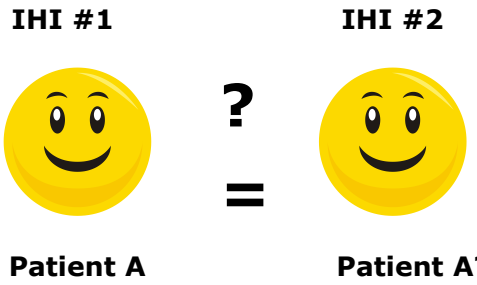
2.2 Healthcare identifier standards

It is intended that standards will be developed in the near future that will form the basis of CCA for the HI Service and will be included in subsequent revisions to this document as they become available. The Standards Australia IT-014-02 working group is including in project 8101 of its 2011/12 work program the enhancement of the existing Australian standards for healthcare clients (recipients) [AS5017], healthcare providers [AS4846] and the handbook [HB222], to incorporate ISO standard work (specifically Subject of Care Identification [ISO22220] and Provider Identification [ISO27527]), HL7 messaging requirements and to harmonise with NEHTA HI activities. These standards contain conformance requirements that are not included in this HI software conformance requirements document. As IT-014 will be updating these standards to include healthcare identifiers from the HI Service, developers of health software are encouraged to design their software to conform to these Australian and international standards as well as the software conformance requirements listed in this document. Developers should note that while conformance to these standards is encouraged, it is the requirements in section 3 of this document that will be used when testing the conformance of health software.

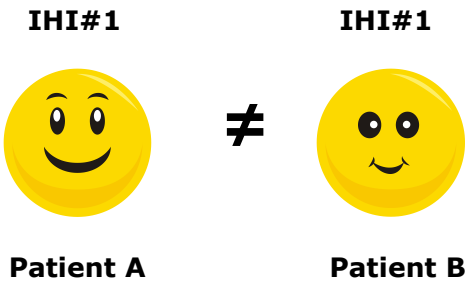
2.3 Definitions

For the purpose of this specification, the following definitions apply.

Term	**Definition**
Active IHI number status	An IHI has an active status when it does not have a date of death on the record, the age is not greater than 130 years and the number status is not expired, retired, resolved or deceased.
Alert	Electronic notification of an event or immediate action required. An alert will typically be displayed on the user interface but may be recorded in a file or database. A healthcare provider shall have a defined response procedure for handling alerts.
B2B	Business-to-business. B2B refers to the web services channel used by software to access the HI Service.
Background process	Any technique that manages computer resources so that selected system activities are transparent and non-obtrusive to the local operator.
Conformance requirements	Requirements, indicated by the word 'shall' or 'shall not', which are mandatory for conformance with this specification and recommendations, indicated by the word 'should' or 'should not', which provide best practice solutions but are not mandatory.

Deceased IHI number status	A deceased status is an indication that another healthcare provider has reason to believe the individual to whom an IHI is assigned has died. An IHI has a deceased status when there is a date of death present on the record but it has not yet been matched with Fact of Death Data from Births, Deaths and Marriages Registries and age is not greater than 130 years.
Duplicate IHI	When a patient record has been assigned two different IHIs, the IHIs are referred to as duplicates. This represents an error condition requiring active management. The diagram depicts potential duplicate IHIs.  This definition of 'duplicate IHI' is the same definition used by the HI Service. For the purpose of this document, a duplicate IHI is not a replica IHI.
Expired IHI number status	The expired status indicates when a record is no longer active. An IHI has an expired status where it is provisional and there has been no activity on the record for 90 days, or where it is unverified and has reached an age of 130 years.
Family name	That part of a name a person usually has in common with some other members of his/her family, as distinguished from his/her given names [AS5017]. Surname and last name are synonyms of family name. Health software systems may store the preferred family name and/or the registered/legal family name. If more than one family name is stored, the system will typically distinguish between the different family names through the use of alias names or name usage indicators.

Given Name	A person's identifying name(s) within the family group or by which the person is uniquely socially identified [AS5017]. First name, middle name, second name and forename are synonyms of given name.
Healthcare identifier	An identifier assigned to a healthcare provider (individual or organisation) or a healthcare recipient as defined in the Healthcare Identifiers Act [HIACT2010]. Note: this term is used generally in healthcare to refer to any healthcare identifier including local numbers, but in this document is restricted to mean only the national healthcare identifier context.
HI implementation	A health software system that manages and uses local copies of healthcare identifiers.
IHI number status	The IHI number status may be Active, Deceased, Retired, Expired or Resolved. This attribute of the IHI is referred to as 'IHI status' in the system interface specifications published by the HI Service operator, Medicare Australia.
IHI record status	The status of the record in the HI Service of an individual healthcare recipient. The IHI record status may be Provisional, Unverified or Verified.
IEC	International Electrotechnical Commission.
IRN	Individual Reference Number. The number on the Medicare Card located beside each person's name.
ISO	International Organisation for Standardisation.
OCR	Optical character recognition; the mechanical or electronic translation of scanned images of handwritten, typewritten or printed text into machine-encoded text.
Provisional IHI	When an IHI record is provisional it means the identifier was created at a healthcare facility when the healthcare recipient was not able to be identified.

Replica IHI	One IHI assigned to two or more patient records in the health software system. This represents an error condition requiring active management. The diagram depicts potential replica IHIs.  This definition of 'replica IHI' is the same definition used by the HI Service. For the purpose of this document, a replica IHI is not a duplicate IHI.
Resolved IHI number status	An IHI has a resolved status when it has been linked with another record as part of resolving a provisional record or resolving a duplicate record, or end dated as part of the replica resolution process. If an IHI number search returns a message indicating that the submitted IHI has been resolved, the replacement IHI assigned to the healthcare recipient by the HI Service operator will also be included in the response from the HI Service. The replacement IHI is the correct IHI for the HI implementation to use for the healthcare recipient and the IHI used in the IHI number search is to be recorded in the HI implementation as the healthcare recipient's previous IHI.
Retired IHI number status	An IHI has a retired status when there is a date of death present on the record and either it has been matched with Fact of Death Data from Births, Deaths and Marriages Registries and has had no activity for 90 days or has reached an age of 130 years (verified IHI records only).
Shall	The terms 'shall' and 'shall not' may appear in a conformance requirement to indicate a mandatory requirement in accordance with guidelines published by Standards Australia. Its negative form 'shall not' indicates a prohibition.
Should	The term 'should' and 'should not' may appear in a conformance requirement to indicate a recommendation in accordance with guidelines published by Standards Australia. Its negative form 'should not' indicates an option that should not be supported.

Unverified IHI	When an IHI record is unverified it means the identifier was created by a healthcare organisation and the healthcare individual has not contacted Medicare Australia to verify the IHI by providing Evidence of Identity.
Verified IHI	When an IHI record is verified it means the person is a known customer of Medicare Australia or the Department of Veterans Affairs or has provided Evidence of Identity information that has been recorded in the HI Service to establish the identity of the healthcare individual.

2.4 Acronyms and abbreviations

Acronym/abbreviation	Explanation
HI	Healthcare Identifiers (meaning national healthcare identifier of the HI service)
IHI	Individual Healthcare Identifier (meaning national healthcare identifier of the HI service)
HPI-I	Healthcare Provider Identifier for Individuals
HPI-O	Healthcare Provider Identifier for Organisations

2.5 Achievement of conformance

This document contains conformance requirements for a set of business use cases.

Each business use case (UC) is identified by the notation UC.nnn. Each business use case has conformance requirements and each conformance requirement lists the business use case(s) to which it applies.

Business process models describe the workflow, tasks and decisions for each business use case. They are only intended as a guide for developers of HI implementations and aspects of a business use case that must be supported by HI implementations are explicitly stated as conformance requirements within this document.

HI implementations must conform to the mandatory and any relevant conditional conformance requirements of business use cases they support and not implement any prohibited capabilities for these business use cases. The developer of an HI implementation may select the business use cases applicable to their software and need not support all business use cases.

2.6 Conformance to the HI service interface

A HI implementation may obtain access to the HI Service either:

- Directly, through web services included in the HI Service interface; or
- Indirectly, through third-party software or another health software system that accesses the HI Service.

If the HI implementation accesses the HI Service directly then it must conform to the system interface specifications for the HI Service. These specifications describe web services to access the HI Service and data exchanged between an HI implementation and the HI Service.

If the HI implementation does not access the HI Service directly but does so indirectly via another software system then the HI implementation does not need to conform to the web services but the developer may need to review the specifications to obtain information about the data associated with healthcare identifiers.

The system interface specifications for the HI Service may be obtained from the Medicare Australia website. Note that an accepted Licence Agreement - Use of the Healthcare Identifiers Licensed Material for Notice of Connection with Medicare Australia is required to gain access to the HI Licensed Material which include the system interface specifications.

Conformance requirements associated with HI Service web services relate to the versions outlined in the table below.

TECH.SIS	Web Service	Supported Version	
		N	N-1
3	IHI Update Provisional	v3.0	n/a
5	IHI Update Verified/Unverified	v3.2.0	v3.0.2
6	IHI Inquiry B2B Sync - Single	v3.0	n/a
8	IHI Resolve Provisional – Merge	v3.0	n/a
9	IHI Resolve Provisional – Create Unverified	v3.0.2	n/a
10	IHI Create Provisional	v3.0	n/a
11	IHI Create Unverified	v3.0.2	n/a
12	IHI Inquiry B2B Sync - Batch	v3.0	n/a
12	IHI Inquiry USB Async - Batch	v3.0	n/a
13	Manage Provider or Administrative Individual Details	v3.2.0	n/a
14	Manage Provider Organisation Details	v3.2.0	n/a
15	Read Provider or Administrative Individual Details	v3.2.0	n/a
16	Read Provider Organisation Details	v3.2.0	n/a
17	Search for Individual Provider Directory Entry	v3.2.0	n/a
18	Search for Organisation Provider Directory Entry	v3.2.0	n/a
19	Manage Provider Directory Entry	v3.2.0	n/a
22	Read Reference Data	v3.2.0	n/a
24	IHI Notify Duplicate	v3.2.0	n/a
25	IHI Notify Replica	v3.2.0	n/a

2.7 IHI search technique

Four types of searches for IHIs in the HI Service are statistically most likely to return the correct IHI for a patient record. The types of searches for IHI in the HI Service shall be restricted to these four search types to the likelihood of matching the correct IHI to an individual, thereby avoiding clinical risk of misidentification.

Any health software searching for an IHI in the HI Service using the B2B channel shall use no other IHI search types. An HI implementation need not support all the allowed search types. Note that this requirement does not apply to searches containing an IHI as a search parameter (e.g. searches to validate an IHI).

The search types are:

1. Medicare card search with Medicare card number, IRN, Family name, Given name, Date of birth, and Sex;
2. Medicare card search with Medicare card number, Family name, Given name, Date of birth, and Sex;
3. DVA file number search with DVA file number, Family name, Given name, Date of birth, and Sex; and
4. Detailed IHI search with Family name, Given name, Date of birth, Sex and Address.

More than one search may be performed of each search type. For example search type (4) could be performed with one Given name and if this fails the search type may be repeated with a second Given name for that patient record.

If the health software automatically applies one search after another, then the search iteration shall not continue after a matching IHI has been found.

Health software shall not support any other search types when searching for an IHI in the HI Service. A healthcare provider that needs to perform another search type will do so using another channel to the HI Service, such as the HI Service Team.

The search types may be performed using historical data (e.g. using a person's maiden name for the Family name) subject to the condition that historical data shall be used only if the IHI searches using current data fail to find a matching IHI.

3 Conformance Requirements

This section lists mandatory, conditional and recommended software conformance requirements applicable to software implementing the acquisition of IHIs from the HI Service, storage and usage of healthcare identifiers.

3.1 Mandatory Requirements

This section lists the mandatory software conformance requirements associated with the use of healthcare identifiers.

Requirements listed as mandatory are mandatory within the context of the related business use cases. Health software that implements a business use case must conform to the mandatory requirements for that business use case.

Req No	005801	**Priority**	Mandatory

Individual Healthcare Identifier (IHI) check digit verification upon manual or OCR input

The software shall ensure that whenever an IHI is captured using manual or OCR input all sixteen digits are included, the identifier is stored as 16 continuous digits (no spaces) and the identifier is validated using the Luhn check digit algorithm (See appendix B). If the IHI does not include sixteen continuous digits or fails the Luhn check digit algorithm the IHI shall not be stored and an operator will be alerted.

Related Business Use Cases	UC.010, UC.015, UC.035
Additional Information	Performing these checks on an IHI entered manually or by OCR will assist with ensuring the IHI has not been corrupted, modified or contain errors.

Req No	005805	**Priority**	Mandatory

Maximum name length

When interacting with the HI Service the software shall be able to send no more than 40 characters for a patient's family name and send no more than 40 characters for each of a patient's given names. The given and family names shall be stored in full in the software system. If the HI Service returns a shortened patient name then the local system shall ensure the shortened name does not replace the full length patient name.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	The HI Service uses only the first 40 characters of a family name and any given name.

Req No	005808	**Priority**	Mandatory

Capture and storage of date of birth

The software shall allow for the capture and storage of a patient's full date of birth inclusive of day, month and four-digit year.

Related Business Use Cases	UC.005, UC.010, UC.015
Additional Information	Date of birth is a required IHI Search parameter as described in the HI Service system interface specifications [TECH.SIS.HI.06 and TECH.SIS.HI.12]. The full date of birth needs to be stored using the day, month and 4-digit year. The accuracy of the birth date may also be indicated (refer requirement #5915).

Req No	005817	**Priority**	Mandatory

Allow a patient record without an IHI

The software shall allow the creation and storage of a patient's record without an IHI.

Related Business Use Cases	UC.010
Additional Information	The IHI is not a mandatory number for the provision of healthcare services.

Req No	005820	**Priority**	Mandatory

Recording of IHI details upon IHI assignment and update

When assigning a new IHI or updating IHI details in a patient record, the software shall store the following:

- the IHI number;

- the IHI number status (Active/Deceased/Retired/Expired/Resolved);

- the date and time of the assignment/update (the assignment time shall be stored in hours and minutes unless the system is capable of more precision).

- the IHI record status (Verified/Unverified/Provisional).

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	Knowledge of the IHI number status, IHI record status, and date of assignment/update is used in the ongoing maintenance of an IHI in a patient record. The software shall retain previously assigned IHIs, including their number status and record status, in the patient records for historical purposes (see requirement 5847).

Req No	005839	**Priority**	Mandatory

Exception alert raised when the same IHI is assigned to records of more than one patient.

The software shall raise an exception alert whenever an IHI is assigned to a patient record and the same IHI has already been assigned to one or more other records of patients in the local system. The software shall also prevent this IHI from being included in any clinical document or any other communication generated for all affected patient records until this condition is resolved.

Related Business Use Cases	UC.010, UC.015, UC.025
Additional Information	Creating an exception alert when the same IHI has been assigned to two or more patients in the local system allows the operator to resolve local record issues or to report the IHI to the HI Service as a potential replica. The HI Service may be notified of a potential replica by the Notify of Replica IHI by B2B web service [TECH.SIS.HI.25] or by contacting the HI Service operator.

Req No	005843	**Priority**	Mandatory

Display of IHI Number Status and IHI Record Status

The software shall have the capability to display the IHI number assigned to a patient, the IHI number status and the IHI record status.

Related Business Use Cases	UC.010, UC.015, UC.035
Additional Information	Having the capacity to display the IHI number status and record status together with the IHI will enable the operator to make informed decisions regarding the validity of the IHI and any need to re-validate it.

Req No	005847	**Priority**	Mandatory

Storage of a patient's previous IHI details

The software shall store previously assigned IHIs, including their number status and record status, in the patient records for historical and audit purposes.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	The capacity for systems to be able to retain previously used IHIs would greatly assist with auditing, in ascertaining the identity of a patient and ensuring that the records maintained over time are assigned to the correct patient record.

Req No	005872	**Priority**	Mandatory

Revalidation of individual IHIs

Req No	005872	Priority	Mandatory

Revalidation of individual IHIs

The software shall allow for the revalidation on demand of individual IHI numbers, IHI number statuses and IHI record statuses, using either the IHI Inquiry Search via B2B or the IHI Batch Searching via B2B web service described in the HI Service system interface specifications [TECH.SIS.HI.06 and TECH.SIS.HI.12 respectively], regardless of the IHI record status.

Related Business Use Cases	UC.015, UC.035
Additional Information	This requirement ensures that the most current IHI, IHI number status and IHI record status can be assigned to the patient's record in the software. Revalidation on demand means the revalidation is performed by operator request or is scheduled.

Req No	005873	Priority	Mandatory

Creation of error log for all errors

The software shall create an error log for all error messages received from the HI Service including those that are resolved automatically. The log shall include the error date/time, in hours and minutes unless the system is capable of more precision, the error number, the message and message ID reported by the HI Service.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	If the software is unable to complete a transaction with the HI Service then manual intervention may be required. By recording the error in a log a local operator will be able to review the error and take appropriate action.

Req No	005875	Priority	Mandatory

Assignment of verified IHIs

If the software stores IHIs and a single verified IHI is returned from the HI Service for a patient, and the software detects no conflict with another patient's demographic data within the local system, the software shall have the capacity to assign the verified IHI to the patient's record.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	Storing a verified IHI with a patient record assists with the realisation of the clinical safety benefits of the HI Service.

Req No	005906	Priority	Mandatory

IHI assignment for merged patient health record in the local system

When merging two patient records in the local system, the software shall use either the IHI Inquiry Search via B2B [TECH.SIS.HI.06] or the IHI Batch Searching via B2B [TECH.SIS.HI.12], as outlined in section 2.7, to obtain the IHI, the IHI number status and IHI record status for the surviving or final merged patient record.

Related Business Use Cases	UC.035
Additional Information	The IHI Inquiry Search via B2B is to be performed even if the original patient records both possessed the same IHI. Contacting the HI Service to obtain the IHI ensures the most recent status information is obtained.

Req No	006077	Priority	Mandatory

Only one IHI shall be assigned to a patient's record

The software shall ensure that only one IHI can be assigned to a patient record.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	Note that this requirement does not prevent the retention in a patient record of previously assigned IHIs. The IHI is the healthcare identifier that shall be used in the communication of a patient's health information to other healthcare providers. This presence of one only IHI in the patient record will assist the consistency and reliability in patient related health communications, and ensuring common understanding between the two healthcare providers. Previous IHIs associated with a patient shall be stored by the software (see requirement #5847).

Req No	006105	Priority	Mandatory

Capability to request the revalidation of verified IHIs upon update of core demographic details in the local system

When core demographic details associated with a verified IHI in a patient's record are updated the software shall provide the operator with the capacity to request the revalidation of that IHI, using either the IHI Inquiry Search via B2B web service [TECH.SIS.HI.06] or the IHI Batch Searching via B2B web service [TECH.SIS.HI.12] to get the most up-to-date information.

Related Business Use Cases	UC.015
Additional Information	Care should be exercised when a patient, whose record is currently associated with a verified IHI, advises healthcare providers of new or changed core demographic details upon presentation if they have not yet advised the HI Service operator. This is because the update of core demographic

Req No	006105	Priority	Mandatory

Capability to request the revalidation of verified IHIs upon update of core demographic details in the local system

details and subsequent revalidation of the IHI, that would then be triggered, may result in no IHI being found by the HI Service.

The capacity to revalidate IHIs upon update of core demographic details may be a configurable option.

Core demographic details consist of:

- Family name;

- Sex;

- Date of birth.

Note that the HI Service does not record a history of changes made to a person's date of birth or sex.

Req No	006119	Priority	Mandatory

Exception alert when the validation of an already active IHI returns a status other than 'active' for a patient

When validation is performed on an IHI of any record status for a patient with an IHI number status of 'active' in the local system, the software shall alert an operator if the HI Service returns a different IHI number status or record status.

If the HI Service reports the status of the IHI as 'resolved' then the software shall record the new 'active' IHI (returned by the HI Service) in the patient record in addition to alerting the operator.

Related Business Use Cases	UC.015, UC.025
Additional Information	If the HI Service returns any number status other than 'active' for a patient that is considered current, then the patient may now be deceased or data about the patient may be out of date. Alerting an operator allows him/her to take appropriate action. If the HI Service reports the IHI number status has now been 'resolved', this indicates that the HI Service operator has determined that the IHI is either a duplicate or replica and this IHI must no longer be used. Note: If the HI Service query is performed by including the IHI in the search, and the IHI was resolved, then the new active IHI will be returned in the response in addition to a message stating that the previous IHI has been resolved.

Req No	008028	**Priority**	Mandatory

Record audit trail of each healthcare identifier disclosed by the HI Service

The software shall have the ability to record an audit trail of all requests for the HI Service to disclose a healthcare identifier of any type. The audit trail shall be retrievable.

The audit trail shall record at least the following items:

- The healthcare identifier

- Any local patient record identifier(s)

- Identifying information of the operator or responsible officer that initiated access to the HI Service

- HPI-I of the operator if applicable

- The healthcare identifier (HPI-O) of the healthcare provider organisation that initiated the request to the HI Service

- The HI Service operation (web service name) against the healthcare identifier

- System date and time (time in hours and minutes unless the system is capable of more precision)

- The HI Service messageID reported by the web service [TECH.SIS.HI.01]

- The version of the HI Service web service

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	The capacity to capture and report on activities (e.g. search/check/update/refresh/edit) against healthcare identifiers will assist in meeting the HI regulations [HIREG2010]. The HI regulations specify logs must be kept for 7 years starting on the day after the operator ceased to be authorised. In the case of a batch operation the operator may be the name of the Responsible Officer.

Req No	008526	**Priority**	Mandatory

Mandatory search technique and search types

The software shall use the search technique and search types stated in section 2.7 for all the IHI searches it conducts using the B2B channel which do not use the IHI number as a search criteria.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	The IHI search technique and search types outlined in section 2.7 reduce the risk of returning an incorrect IHI match.

3.2 Conditional Requirements

This section lists the conditional software conformance requirements associated with the use of healthcare identifiers.

Requirements listed as conditional are conditional within the context of the related business use cases. Support for conditional requirements associated with a business use case is mandatory, subject to the condition.

Req No	005807	**Priority**	Conditional

Check digit validation of swiped Medicare cards or manually input Medicare card numbers

If the software supports the swiping of Medicare cards or the manual entry of Medicare card numbers, the software shall record the Medicare card number only if it is validated using the check digit algorithm described in Appendix C, otherwise the operator will be alerted of the error.

Related Business Use Cases	UC.005, UC.010, UC.015
Additional Information	Searching by the Medicare card number is considered one of the most reliable means of finding a patient's IHI.

Req No	005810	**Priority**	Conditional

Provisional IHI Configuration Options

If the software supports provisional IHIs the software shall support the following configuration options to control the creation and usage of provisional IHIs within the local system:

- Provisional IHIs are never created and are never associated with patient records;

- Provisional IHIs are associated with patient records and may also be created at the discretion of an operator.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	The configuration options ensure the healthcare provider has control over the creation of provisional IHIs.

Req No	005811	**Priority**	Conditional

Unverified IHIs Configuration Options

If the software supports unverified IHIs , the software shall support the following configuration options to control the creation and usage of unverified IHIs within the local system:

- Unverified IHIs are never created and are never associated with patient records;

- Unverified IHIs are associated with patient records and may also be created at the discretion of an operator.

Related Business	UC.010, UC.015, UC.025, UC.035

Req No	005811	Priority	Conditional

Unverified IHIs Configuration Options

Use Cases

Additional Information	The configuration options ensure the healthcare provider has control over the creation of unverified IHIs.

Req No	005819	Priority	Conditional

Validation of manually-entered IHIs

If the software supports the manual or OCR input of IHIs, the software shall validate any IHI which is either manually input or input via optical character recognition technology through a call to the HI Service using either the IHI Inquiry Search via B2B web service [TECH.SIS.HI.06] or the IHI Batch Searching via B2B [TECH.SIS.HI.12]. The software shall validate the IHI immediately upon entry and shall alert the local operator if the IHI is assessed as invalid.

Related Business Use Cases	UC.010, UC.015, UC.035
Additional Information	Any IHI which is associated with a patient record through either manual or OCR input does not provide any assurance of validity until such time it has been successfully validated with the HI Service. Until this has occurred, any manually/OCR input IHI should not be used in any internal or external communication about the patient's healthcare.

Req No	005836	Priority	Conditional

Prohibition of uncontrolled system-initiated creation of provisional and unverified IHIs

If the software supports unverified or provisional IHIs the software shall create a provisional or unverified IHI only by the request of the local operator. The software shall not support automatic creation of a provisional or unverified IHI.

Related Business Use Cases	UC.010, UC.015
Additional Information	Uncontrolled creation of unverified and provisional IHIs will erode the utility of provisional and unverified IHIs.

Req No	005842	Priority	Conditional

Printing of unverified IHIs

If the software supports unverified IHIs, when the unverified IHI is created, the software shall print the IHI number, the IHI number status, the IHI record status and the patient demographic information used to create the IHI and supporting documentation.

Related Business Use Cases	UC.010, UC.015

Req No	005842	**Priority**	Conditional

Printing of unverified IHIs

Additional Information	Providing the unverified IHI and associated identification information to the patient allows them to resolve the record status of the IHI with the HI Service operator or to present IHI related documentation to other healthcare providers.

Req No	005845	**Priority**	Conditional

Format for printing an IHI

If the software prints an IHI it shall print the IHI as 4*4*4*4 split string.

Related Business Use Cases	UC.010, UC.015, UC.035
Additional Information	Printing the 16-digit IHI string in an easy to read and already accepted and used format reduces the risk of transcription errors.

Req No	005874	**Priority**	Conditional

Transmission of demographic updates for unverified IHIs

If the patient record is associated with an Unverified IHI and the patient's demographic details are updated, the software shall have the ability to transmit the updated demographic details to the HI Service using the Update IHI via B2B web service [TECH.SIS.HI.05].

Related Business Use Cases	UC.015, UC.035
Additional Information	Healthcare providers may search for a patient's IHI using his/her demographic information, and so it is important to update the HI Service of any changes to this information so that a search for an IHI is more likely to find a patient's healthcare identifier.

Req No	005902	**Priority**	Conditional

Notification of resolved provisional IHI

If the software supports provisional IHIs, it shall notify the HI Service of the resolution of a provisional IHI by doing one of the following:

- for resolution of a provisional IHI by creation of an unverified IHI, the software shall notify the HI Service via the B2B channel using the Resolve Provisional IHI - Create Unverified IHI via B2B web service [TECH.SIS.HI.09];

- for resolution of a provisional IHI by merge with an existing verified or unverified IHI, the software shall notify the HI Service via the B2B channel using the Resolve Provisional IHI - Merge Records via B2B web service [TECH.SIS.HI.08].

Related Business	UC.035

Req No	005902	**Priority**	Conditional

Notification of resolved provisional IHI

Use Cases

Additional Information	Notifying the HI Service via the B2B channel is the most effective way of resolving a provisional IHI. The timely notification of resolved provisional IHIs also enhances data quality within the HI Service.

Req No	005915	**Priority**	Conditional

Capture of date of birth accuracy indicator

If the software supports unverified or provisional IHIs, the software shall capture and store the date of birth accuracy indicator as detailed in HI Service system interface specification [TECH.SIS.HI.02].

Related Business Use Cases	UC.010
Additional Information	The software should allow for the capture and storage of a patient's date of birth accuracy indicator in a format which complies with HI Service system interface specification [TECH.SIS.HI.02]. The storing of date of birth accuracy indicators is a requirement to generate provisional or unverified IHIs.

Req No	006104	**Priority**	Conditional

Enforce search before creation of unverified IHIs

If the software supports the creation of unverified IHIs, the software shall request the HI Service to create an unverified IHI for a patient only after performing an IHI search as outlined in section 2.7, and obtaining no match.

Related Business Use Cases	UC.010, UC.015
Additional Information	The benefits of using healthcare identifiers are obtained through the use of patients' existing IHIs. The uncontrolled proliferation of unverified IHIs may undermine the realisation of the benefits derived from the usage of verified IHIs. The HI Service will prevent the creation of an unverified IHI if the unverified demographic details match a person whose demographic details are already stored in the HI Service.

Req No	008218	**Priority**	Conditional

Non-support for provisional IHIs

If the software does not support provisional IHIs then the software shall not store any IHI provided by the HI Service with a provisional record status. In addition, the software shall raise an alert if an IHI is received with a provisional record status.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035

Req No	008219	**Priority**	Conditional

Non-support for unverified IHIs

If the software does not support unverified IHIs, then the software shall not store any IHI provided by the HI Service with an unverified record status. In addition, the software shall raise an alert if an IHI is received with an unverified record status.

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035

3.3 Recommended Requirements

This section lists the recommended software conformance requirements associated with the use of healthcare identifiers.

Requirements listed as recommended are recommended within the context of the related business use cases. Health software that implements a business use case should conform to the recommended requirements for that business use case, even though conformance to these requirements is not mandated.

Req No	005802	**Priority**	Recommended

Manual entry of an IHI

If the software permits the capture of a patient demographic record, the software should permit the manual entry of an IHI.

Related Business Use Cases	UC.005, UC.010, UC.015, UC.035
Additional Information	An IHI may be obtained from the HI Service through other channels such as HPOS or HI Service operator's HI Service Team or may be provided on an IHI token. This will require the manual entry of the IHI into the software.

Req No	005804	Priority	Recommended

Identification of a patient's given and family name

Where multiple names are recorded for a patient, the software should identify which of the names recorded is the patient's given and family name. The software should also indicate which name(s) are associated with the IHI by the HI Service.

Related Business Use Cases	UC.005, UC.010, UC.015
Additional Information	Identification of the given and family name is important as queries to the HI Service for an IHI should be made using the patient's given and family name. If the patient has a Medicare card the name on the Medicare card should be used. Indicating which name(s) are associated with the IHI by the HI Service assists with revalidation of the IHI.

Req No	005809	Priority	Recommended

Capture and storage of one or more other name(s) for a patient

The software should allow for the capture and storage of one or more other name for a patient.

Related Business Use Cases	UC.010, UC.015, UC.035
Additional Information	The ability of the software to store at least another name, in addition to the given and family name, for the patient, is likely to increase the probability of successfully retrieving the patient's IHI from the HI Service. A patient's other name does not mean a patient's previous name.

Req No	005812	Priority	Recommended

IHI Number search

The software should be able to conduct an IHI Number search using either the IHI Inquiry Search via B2B web service [TECH.SIS.HI.06] or the IHI Batch Searching via B2B [TECH.SIS.HI.12].

Related Business Use Cases	UC.010, UC.015
Additional Information	The ability to search by IHI number significantly increases the likelihood of finding a successful match.

Req No	005813	**Priority**	Recommended

Medicare card search

The software should be able to conduct a search by Medicare card number using the IHI Inquiry Search via B2B web service [TECH.SIS.HI.06] or the IHI Batch Searching via B2B [TECH.SIS.HI.12] as outlined in section 2.7.

Related Business Use Cases	UC.010, UC.015
Additional Information	Using the Medicare card number in an IHI search is the most successful way of finding a matching record.

Req No	005814	**Priority**	Recommended

DVA File number search

The software should have the ability to conduct a search by DVA File number and supporting patient demographic information using the IHI Inquiry Search via B2B web service described in the HI Service system interface specification [TECH.SIS.HI.06] or the IHI Batch Searching via B2B [TECH.SIS.HI.12] as outlined in section 2.7.

Related Business Use Cases	UC.010, UC.015
Additional Information	The IHI Inquiry Search via B2B and the IHI Batch Searching via B2B system interface specifications outline the different types of searches that can be conducted to retrieve an IHI. The ability to search by DVA File number would significantly increase the likelihood of finding a successful match.

Req No	005815	**Priority**	Recommended

Detailed IHI search

The software should be able to conduct a detailed IHI search which includes the Recommended supply of address search parameters using either the IHI Inquiry Search via B2B or the IHI Batch Searching via B2B web service described in the HI Service system interface specifications [TECH.SIS.HI.06 and TECH.SIS.HI.12] as outlined in section 2.7.

Related Business Use Cases	UC.010, UC.015
Additional Information	The IHI Inquiry Search via B2B and the IHI Batch Searching via B2B system interface specifications outline the detailed search that can be conducted to retrieve an IHI. The ability to search by parameters other than the IHI number, Medicare Card number and DVA File number would provide additional flexibility in conducting IHI searches and increase the likelihood of locating a successful match.

Req No	005818	Priority	Recommended

Resubmit search with modified search criteria

The software should allow the resubmission of the search with amended details when the initial search, as outlined in section 2.7, for an IHI returns no match.

Related Business Use Cases	UC.010, UC.015, UC.035
Additional Information	Software will be more successful in finding a matching record in the HI Service if a new search is submitted with a different combination of patient details.

Req No	005824	Priority	Recommended

Retention of patient's previous names

The software should retain a patient's previous name (family, given and other name) in the patient record history when a new name is recorded for the patient.

Related Business Use Cases	UC.010, UC.015, UC.035
Additional Information	Retaining a patient's previous name assists healthcare providers to conduct successful IHI searches where the patient's name may have changed over time such as in cases of marriage, legal name change and patient presenting under other identities. A patient's previous name does not mean a patient's other name.

Req No	005830	Priority	Recommended

Storage of different types of identifiers

The software should be able to store identifiers of different types in a patient's record. The usage of each identifier shall be clear and unambiguous.

Related Business Use Cases	UC.010, UC.015, UC.035
Additional Information	Patients may present to a healthcare provider using different identifiers such as an IHI, Medicare card numbers/IRNs, and DVA file numbers over time. The storage of these identifiers would greatly assist in ascertaining the identity of a patient. Systems may also need local and regional identifiers and though these are not used in the HI service, they are required for local use and should be consistently maintained to support quality identification practices.

Req No	005831	Priority	Recommended

Automated reading of Medicare and DVA cards

The software should support the entry of a Medicare or DVA card via a card reader.

Related Business Use Cases	UC.005, UC.015
Additional Information	An automated card reader eliminates the need to manually enter card/token numbers, thereby reducing the likelihood of transcription errors and misidentification of healthcare recipients.

Req No	005832	Priority	Recommended

Background process IHI search

When invoking the HI Service B2B channel, the software should do so as a background process.

Related Business Use Cases	UC.010
Additional Information	Using background processes enables the software to be used by an operator while the software concurrently accesses the HI Service. This prevents delays in accessing the HI Service from affecting the delivery of healthcare.

Req No	005844	Priority	Recommended

IHI printed as barcode

If an IHI is printed out the software should print the IHI as a barcode using the international standard for barcode symbology[ISO24723]. The specific barcode symbology is yet to be defined.

Related Business Use Cases	UC.010, UC.015
Additional Information	Entering an IHI by scanning a barcode is preferred rather than manually entering an IHI, as scanning reduces the risk of transcription errors.

Req No	005848	Priority	Recommended

Pre-populate first 6 digits of IHI

The software should enable the display of the first 6 digits of the IHI, i.e. 8003 60, as non editable values.

Related Business Use Cases	UC.010, UC.015
Additional Information	The first 6 digits of the IHI remain the same for all IHIs in Australia.

Req No	005877	Priority	Recommended

Batch refresh

The software should allow for a refresh of IHIs on a batch basis.

Related Business Use Cases	UC.025
Additional Information	Refreshing IHIs on a batch basis is an important mechanism for maintaining data quality as it permits the retrieval of the latest IHI number status and IHI record status.

Req No	005884	Priority	Recommended

Identification of operators in the local system

User account information stored by the software should include the ability to record the full name of the operator.

Related Business Use Cases	UC.045
Additional Information	Storing the full name of the operator and assists a healthcare provider to comply with clause 8 of the HI regulations [HIREG2010].

Req No	005901	Priority	Recommended

Record potential duplicate IHIs

The software should produce a record of potential duplicate IHIs.

Related Business Use Cases	UC.035
Additional Information	The ability of the software to automatically generate records of potential duplicate IHIs would greatly assist in the prompt investigation and resolution of duplicates.

Req No	005903	Priority	Recommended

Notification of date of death

The software should use the B2B channel to notify the HI Service of the patient's date of death by the using one of the following web services:

- Update Provisional IHI via B2B [TECH.SIS.HI.03] if the patient's record was associated with a provisional IHI in the local system or

- Update IHI via B2B [TECH.SIS.HI.05] if the patient's record was associated with a verified or unverified IHI in the local system.

Related Business Use Cases	UC.015

Req No	005903	**Priority**	Recommended

Notification of date of death

Additional Information	Medicare Australia receives regular data feeds from the States and Territories' Registries of births, deaths and marriages after the facts of death have been established and as such, the notification of death to Medicare Australia is not contingent on healthcare providers notifying the agency. A condition of the federal funding of private healthcare facilities is that these must advise Medicare Australia of their patients' date of death.

Req No	005917	**Priority**	Recommended

Record of operator

The software should keep a retrievable record of each operator who accessed a healthcare identifier from the HI Service; where the identifier may have been accessed from a B2B interface.

Related Business Use Cases	UC.010, UC.015, UC.025
Additional Information	The requirement assists healthcare providers in complying with clause 8.1 and clause 8.2 of the HI regulations [HIREG2010]. The intent of this requirement is for the software to retain enough traceability information to enable the verification that only Authorised Employees access the HI service.

Req No	008167	**Priority**	Recommended

Recording IHI source upon IHI assignment and update

When an IHI is stored or updated the software should record the source of the IHI as being one of:

- HI Service B2B channel
- Electronic message
- Manual entry (including OCR)

Related Business Use Cases	UC.010, UC.015, UC.025, UC.035
Additional Information	An IHI obtained directly from the HI Service is more likely to be trusted than an IHI received in an electronic message from another healthcare provider, which is more likely to be trusted than an IHI entered either manually or via OCR. Knowing the source of an IHI allows an operator to make decisions about the need for validating an IHI. A batch assignment of IHI's is considered to use the B2B channel.

Appendix A: Business use cases and associated conformance requirements

The table below lists the healthcare identifiers business use cases being covered by this document and the applicable mandatory, conditional and recommended conformance requirements.

Support for conditional requirements is mandatory, subject to a stated condition.

Business Use Case No	Business Use Case Description	Mandatory Conformance Requirements	Conditional Conformance Requirements	Recommended Conformance Requirements
UC.005	Search for patient health record	5808	5807	5802, 5804, 5831
UC.010	Register patient	5801, 5805, 5808, 5817, 5820, 5839, 5843, 5847, 5873, 5875, 6077, 8028, 8526	5807, 5810, 5811, 5819, 5836, 5842, 5845, 5915, 6104, 8218, 8219	5802, 5804, 5809, 5812, 5813, 5814, 5815, 5818, 5824, 5830, 5832, 5844, 5848, 5917, 8167
UC.015	Update patient health record	5801, 5805, 5808, 5820, 5839, 5843, 5847, 5872, 5873, 5875, 6077, 6105, 6119, 8028, 8526	5807, 5810, 5811, 5819, 5836, 5842, 5845, 5874, 6104, 8218, 8219	5802, 5804, 5809, 5812, 5813, 5814, 5815, 5818, 5824, 5830, 5831, 5844, 5848, 5903, 5917, 8167
UC.025	Bulk update of IHI details	5805, 5820, 5839, 5847, 5873, 5875,6077, 6119, 8028, 8526	5810, 5811, 8218, 8219	5877, 5917, 8167
UC.035	Merge patient health records	5801, 5805, 5820, 5843, 5847, 5872, 5873, 5875, 5906, 6077, 8028, 8526	5810, 5811, 5819, 5845, 5874, 5902, 8218, 8219	5802, 5809, 5818, 5824, 5830, 5901, 8167
UC.045	Logon to software system	None	None	5884

Appendix B: Luhn check algorithm

The Luhn formula for computing modulus-10 "double-add-double" check digits is described in Annex B of the standard for identification card numbering system [ISO7812-1].

The check digit is calculated on all of the digits of IHI.

The following steps are involved in this calculation:

1. Step 1: Double the value of alternate digits beginning with the first right-hand digit (low order).
2. Step 2: Add the individual digits comprising the products obtained in Step 1 to each of the unaffected digits in the original number.
3. Step 3: Subtract the total obtained in Step 2 from the next higher number ending in 0 (this is the equivalent of calculating the "tens complement" of the low-order digit (unit digit) of the total). If the total obtained in Step 2 is a number ending in zero (30, 40, etc.), the check digit is 0.

EXAMPLE

Personal Identifier without check digit: 612345 123456789

Identifier:	6	1	2	3	4	5	1	2	3	4	5	6	7	8	9
Double alternate digits:	X2		X2		X2		X2		X2		X2		X2		X2
	12	1	4	3	8	5	2	2	6	4	10	6	14	8	18
Add individual digits:	1+2	+1	+4	+3	+8	+5	+2	+2	+6	+4	+1+0	+6	+1+4	+8	+1+8

Total = 67

Next higher number ending in 0 = 70

70 – 67 = 3

Check digit = 3

Personal Identifier with check digit: 612345 123456789 3

Appendix C: Medicare card number check algorithm

Medicare card number format

The Medicare card number comprises:

- Eight digits;
- A check digit (one digit); and
- An issue number (one digit).

Note: the first digit of the Medicare card number should be in the range 2 to 6.

Medicare card number check digit calculation

1. Calculate the sum of: ((digit 1) + (digit 2 * 3) + (digit 3 * 7) + (digit 4 * 9) + (digit 5) + (digit 6 * 3) + (digit 7 * 7) + (digit 8 * 9)),

where digit 1 is the highest place value digit of the Medicare card number and digit 8 is the lowest place value digit of the Medicare card number.

Example: for Medicare card number '2123 45670 1', digit 1 is 2 and digit 8 is 7.

1. Divide the calculated sum by 10.
2. The check digit is the remainder.

Example: For Medicare card number 2123 4567.

1. (2) + (1 * 3) + (2 * 7) + (3 * 9) + (4) + (5 * 3) + (6 * 7) + (7 * 9) = 170
2. Divide 170 by 10. The remainder is 0.
3. The check digit for this Medicare number is 0.

Appendix D: References

This appendix lists specifications and other documents that provide information for or about this document. At the time of publication, the document versions listed below were valid. However, as all documents are subject to revision, readers are encouraged to use the most recent versions of these documents.

Reference	Description
AS4846	Health Care Provider Identification, AS 4846—2006, AS 4846—2006, Standards Australia, 2006
AS5017	Health Care Client Identification, AS 5017—2006, Standards Australia, 2006
HB222	Australian Health Care Client and Provider Identification Handbook, HB 222—2006, Standards Australia, 2006
ISO22220	International Technical Specification Health Informatics: Subject of Care Identification, ISO/TS 22220:2008
ISO27527	International Technical Specification Health Informatics Healthcare Provider Identification, ISO/TS 27527:2010
HIACT2010	Healthcare Identifiers Act 2010, 1 November 2010
HIREG2010	Healthcare Identifiers Regulations 2010, Select Legislative Instrument 2010 No. 190, Commonwealth of Australia, 29 June 2010 http://www.comlaw.gov.au/ComLaw/Legislation/LegislativeInstrument1.nsf/0/46BC494EFB02B570CA257752002B3C3E/$file/1002658A100624EV.pdf Last accessed 01/12/2010
ISO24723	ISO/IEC 24723:2010 Information Technology – Automatic identification and data capture techniques – GS1 Composite bar code symbology specification. International Organisation for Standardization, 2010
ISO7812-1	ISO/IEC 7812-1 Identification cards – Identification of issuers – Part 1: numbering system, International Organization for Standardization, 2006

[NEHTA2011a] Healthcare Identifiers - Business Use Cases, NEHTA, 2011

[NEHTA2011b] Healthcare Identifiers Software – Conformance Assessment Scheme version 1.6, NEHTA, 2011

[NEHTA2011c] Use of Healthcare Identifiers in Health Information Systems: Conformance Test Specifications, version 1.0, NEHTA, 2011

TECH.SIS.HI.02 Healthcare Identifiers (HI) Service, System Interface Specification (SIS)
Common Field Processing Reference Document, TECH.SIS.HI.02, Medicare Australia, December 2010.

TECH.SIS.HI.03 Healthcare Identifiers (HI) Service, System Interface Specification (SIS) Update Provisional IHI via B2B, TECH.SIS.HI.03, Medicare Australia, December 2010

TECH.SIS.HI.05 Healthcare Identifiers (HI) Service, System Interface Specification (SIS) Update IHI via B2B V3.0.2, TECH.SIS.HI.05, Medicare Australia, December 2010.

TECH.SIS.HI.06 Healthcare Identifiers (HI) Service, System Interface Specification (SIS) SIS- IHI Inquiry Search via B2B V3.0.2, TECH.SIS.HI.06, Medicare Australia, December 2010.

TECH.SIS.HI.08 Healthcare Identifiers (HI) Service, System Interface Specification (SIS) Resolve Provisional IHI – Merge Records via B2B, TECH.SIS.HI.08, Medicare Australia, December 2010.

TECH.SIS.HI.09 Healthcare Identifiers (HI) Service, System Interface Specification (SIS) Resolve Provisional IHI – Create Unverified IHI via B2B, TECH.SIS.HI.09, Medicare Australia, December 2010.

TECH.SIS.HI.12 Healthcare Identifiers (HI) Service, System Interface Specification (SIS) SIS- IHI Batch Searching V3.0.2, TECH.SIS.HI.06, Medicare Australia, December 2010.

TECH.SIS.HI.24 Healthcare Identifiers (HI) Service, System Interface Specification (SIS) Notify of Duplicate IHI via B2B V3.0.2, TECH.SIS.HI.24, Medicare Australia, December 2010.

TECH.SIS.HI.25 Healthcare Identifiers (HI) Service, System Interface Specification (SIS) Notify of Replica IHI via B2B V3.0.2, TECH.SIS.HI.25, Medicare Australia, December 2010.