



Person and provider identification in healthcare



This Australian Standard® was prepared by Committee IT-014, Health Informatics. It was approved on behalf of the Council of Standards Australia on 31 July 2014. This Standard was published on 18 August 2014.

The following are represented on Committee IT-014:

- Aged Care Association Australia
- Allied Health Professionals Australia
- Australasian College of Health Informatics
- Australian and New Zealand College of Anaesthetists
- Australian College of Nursing
- Australian Healthcare and Hospital Association
- Australian Information Industry Association
- Australian Institute of Health and Welfare
- Australian Institute of Radiography
- Australian Medical Association
- Australian Private Hospitals Association
- Consumers Federation of Australia
- CSIRO e-Health Research Centre
- Department of Health
- Department of Health, Vic.
- Department of Health, WA
- Edith Cowan University
- Engineers Australia
- GS1 Australia
- Health Information Management Association of Australia
- HL7 Australia
- Integrating the Healthcare Enterprise Australia
- Medical Software Industry Association
- National E-Health Transition Authority
- NSW Ministry of Health
- Royal Australian College of Medical Administrators
- Royal College of Pathologists of Australasia
- The Pharmacy Guild of Australia
- The Royal Australian and New Zealand College of Radiologists
- The University of Sydney
- University of Western Sydney

Additional Interests:

- ACT Government health
 - Australian Health Practitioner Regulation Agency
 - Casprel
 - Department of Human Services
 - Holmes Health Information
 - Llewelyn Grain Informatics
 - McCauley Software
 - Mater Health Services
 - Michael Legg and Associates
 - Queensland Health
-

This Standard was issued in draft form for comment as DR AS 4846.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting www.standards.org.au

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

Australian Standard[®]

Person and provider identification in healthcare

Originated as AS 4846—2004 and AS 5017—2002.
Previous editions AS 4846—2006 and AS 5017—2006.
Revised, amalgamated and designated as AS 4846:2014.

COPYRIGHT

© Standards Australia Limited

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 806 1

PREFACE

This Standard was prepared by Standards Australia Technical Committee IT-014, Health Informatics, to supersede AS 4846—2006, *Health Care Provider Identification*, and AS 5017—2006, *Health Care Client Identification*, and in response to requests from the healthcare service community.

Standards Australia Technical Committee IT-014 recognizes the work of the Standards Australia Subcommittee IT-014-02, Health Concept Representation, in the preparation of this Standard.

The objective of this Standard is to provide the health industry with a Standard for healthcare provider and individual identification data, which includes processes for clinical and administrative data management purposes (data structure, process and specification).

The structures and practices identified in this Standard have been developed to support workflow in the clinical and administrative environments of healthcare.

This Standard reflects the developments incorporated into international technical specifications ISO/TS 22220:2011, *Health informatics—Identification of subjects of health care*, and ISO/TS 27527:2010, *Health informatics—Provider identification*, and also incorporates the introduction of Australian National Health Identifiers.

HB 222—2006 is being revised to provide additional information on this edition of AS 4846. The revised Handbook will be SA HB 222, *Person and Provider Identification in Healthcare Handbook*.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is for information and guidance only.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

This publication has been developed with assistance from the Australian Government Department of Health. The Australian Government makes no representation or guarantee that the information in this publication is correct and accurate.

Standards Australia wishes to thank the Department of Health for its continued financial support in helping to develop this Australian Standard.

CONTENTS

	<i>Page</i>
FOREWORD.....	6
 SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	8
1.2 OBJECTIVE	9
1.3 APPLICATION	10
1.4 NORMATIVE REFERENCES	11
1.5 DEFINITIONS.....	12
1.6 REGULATORY ENVIRONMENT	14
1.7 RELATIONSHIP TO NATIONAL HEALTHCARE IDENTIFIERS SERVICE	14
1.8 CONSIDERATIONS FOR SYSTEM DESIGN	15
1.9 COMPONENTS OF IDENTIFICATION	16
1.10 CONFORMANCE REQUIREMENTS	17
1.11 DATA ELEMENT STRUCTURE	17
1.12 SUMMARY STRUCTURE	20
1.13 GENERIC VALUE DOMAINS.....	22
1.14 BENEFITS OF POSITIVE IDENTIFICATION	22
1.15 BARRIERS TO SUCCESSFUL IDENTIFICATION	23
 SECTION 2 DATA ELEMENTS—GENERAL	
2.1 GENERAL.....	25
2.2 DATE GROUP	25
 SECTION 3 IDENTIFIERS	
3.1 IDENTIFIERS	28
3.2 PRINCIPLES OF IDENTIFICATION IN HEALTHCARE	29
3.3 PRINCIPLES OF IDENTIFIERS IN HEALTHCARE.....	29
3.4 HEALTHCARE IDENTIFIER.....	30
3.5 IDENTIFIER STATUS.....	35
3.6 SIMILAR BUT DIFFERENT ENTITY	37
3.7 IDENTIFIER USAGE	38
 SECTION 4 INDIVIDUAL NAME	
4.1 GENERAL.....	40
4.2 NAME SEQUENCE NUMBER.....	43
4.3 GENERAL GUIDE TO NAMES.....	43
4.4 HEALTHCARE NAME CONTENT DATA ELEMENTS	44
4.5 GIVEN NAME GROUP	48
4.6 NAME USAGE METADATA GROUP.....	51
4.7 RESTRICTED NAME USAGE.....	54

SECTION 5 INDIVIDUAL ADDITIONAL DEMOGRAPHIC DATA

5.1	GENERAL.....	56
5.2	DATE OF BIRTH GROUP.....	57
5.3	BIRTH PLURALITY.....	58
5.4	DATE OF DEATH GROUP	58
5.5	SEX	61
5.6	GENDER IDENTITY	62
5.7	MOTHER'S ORIGINAL FAMILY NAME.....	63
5.8	PLACE OF BIRTH GROUP.....	63

SECTION 6 ADDRESS GROUP

6.1	GENERAL.....	66
6.2	ADDRESS STATUS GROUP	69
6.3	ADDRESS PURPOSE	73
6.4	ADDRESS COMPONENTS.....	75
6.5	ADDRESS GEOCODE GROUP	92
6.6	ADDRESS COMMUNICATION SUPPRESSION.....	95

SECTION 7 ELECTRONIC ADDRESS GROUP

7.1	ELECTRONIC COMMUNICATION DATA ELEMENTS.....	96
7.2	ELECTRONIC COMMUNICATION TYPE.....	98
7.3	ELECTRONIC COMMUNICATION DETAIL.....	99
7.4	ELECTRONIC COMMUNICATION USAGE CODE	99

SECTION 8 HEALTHCARE PROVIDER QUALIFICATION AND REGISTRATION

8.1	GENERAL.....	101
8.2	PROVIDER PROFESSIONAL BOARD GROUP	106
8.3	HEALTHCARE IDENTIFICATION PROFESSION GROUP	107
8.4	PROVIDER DEMOGRAPHICS GROUP.....	124
8.5	PROVIDER ACADEMIC QUALIFICATION GROUP	124
8.6	PROVIDER PLACE OF PRACTICE GROUP	125
8.7	PROVIDER REGISTRATION GROUP	126
8.8	SPECIAL RESTRICTIONS OR EXTENSIONS TO PRACTICE	129

SECTION 9 HEALTHCARE PROVIDER ORGANIZATION

9.1	GENERAL.....	142
9.2	ORGANIZATION IDENTIFIERS.....	142
9.3	HEALTHCARE PROVIDER ORGANIZATION NAME GROUP.....	145
9.4	HEALTHCARE PROVIDER ORGANIZATION NAME USAGE GROUP.....	147
9.5	HEALTHCARE PROVIDER ORGANIZATION ADDRESS GROUP	148
9.6	HEALTHCARE PROVIDER ORGANIZATION ELECTRONIC COMMUNICATION	148

SECTION 10 BIOMETRIC IDENTIFIERS

10.1	GENERAL.....	150
10.2	COMMON TYPES OF BIOMETRIC IDENTIFICATION.....	150
10.3	INFORMATIVE STANDARDS ON BIOMETRIC IDENTIFICATION.....	151

Page

SECTION 11 CONFORMANCE REQUIREMENTS

11.1 GENERAL.....	154
11.2 QUALITY PROCEDURAL CONFORMANCE REQUIREMENTS	154
11.3 REQUIRED SKILLS AND COMPETENCY	155
11.4 ASSIGNMENT OF RESPONSIBILITIES.....	155
11.5 COMPETENCIES REQUIRED FOR IDENTIFYING PEOPLE OR PROVIDERS	155
11.6 COMPETENCIES REQUIRED FOR HEALTHCARE ORGANIZATIONS	156
11.7 BUSINESS PROCESSES	156
APPENDIX A REFERENCES	158

FOREWORD

This Standard is the result of the need of the health industry for a common, quality based, best practice approach to the capture, use and record keeping of data for the purpose of identifying individuals and healthcare providers.

Without such a Standard, the unique identification of providers and individuals in healthcare will be jeopardized, and there will be a risk that different parties might develop inconsistent, inadequate or ineffective methods of identification. The intention with this Standard is to provide a framework for improving identifying data and the confidence of health service providers and clients alike, so that the data being associated with any given individual, based on which clinical decisions are made, is appropriately associated and used.

This Standard aims to promote uniformly good practice in identifying individuals and healthcare organizations, and recording and using their identifying data. The correct application of this Standard will assist significantly in ensuring that records relating to each individual or organization are associated with that individual or organization, and no other.

In Australia and internationally the delivery of healthcare is undergoing a paradigm shift, brought about by changing consumer expectations, technological advances, economic pressures, socio-demographic change, and changes in the patterns of health and ill health in communities.

These changes include—

- (a) a shift from institution-centred care to client-centred care, together with greater empowerment of healthcare consumers;
- (b) greater emphasis on continuity of services supporting quality and safety, health promotion and maintenance;
- (c) more integrated healthcare, in which organizational and administrative barriers are invisible to clients;
- (d) transition from paper based to electronic media for transactions, including orders, tests and results, sharing of patient health information between various providers, and payments to providers; and
- (e) an environment of shared healthcare information, supported by national initiatives such as shared electronic health record systems.

These new service directions necessitate much greater flow of people, services and information across functional, jurisdictional, administrative and professional boundaries. In a more integrated healthcare environment correct identification is no less critical, but it is far more complex. Population mobility and multiple points of access to the healthcare system lead to the accumulation of client related data in a variety of fragmented, unrelated repositories. Correct identification of individuals and organizations in healthcare is recognized around the world as a critical success factor for healthcare reform.

Original Standards (AS 4846 and AS 5017) in this area had separate documents covering people as patients or carers and providers of care. It has been recognized that the metadata are largely the same for both groups as all have identifiers, names and addresses. For this reason, the specification has merged the requirements for individual providers, people and organizations. This ensures improved consistency of data, while acknowledging that different use cases require variations in rules for collection.

This Standard has been developed to specify the requirements to ensure records relating to each individual or organization are associated with that individual or organization and no other, and that the existence of such records can be established when needed, as well as recognizing the requirement for balance between these two needs. It aims to provide a framework for improving identifying data and the confidence of health service providers and clients alike, so that the data associated with any given individual, in terms of which clinical decisions are made, is appropriately associated and used. This Standard is intended to support all requirements for identification and identifying information throughout the continuum of care and data. Standards related to information exchange of identifying information are not addressed in this document but are specified in the AS 4700 series of publications.

Without such a Standard, the unique identification of providers and individuals in healthcare would be jeopardized, and there would be a risk that different parties might develop inconsistent, inadequate or ineffective methods of identification.

The ability to positively identify individuals and locate their relevant details is critical to the provision of speedy, safe, high quality, comprehensive and efficient healthcare. Health consumers, healthcare providers and the health industry need a common, best practice approach to the way data are captured, used, stored and managed for the purpose of identification.

NOTE: The requirements specified in this Standard are different to those that exist in many legacy systems in Australian healthcare. It is recognized that some of the elements included here are not in existing legacy systems in Australian healthcare. As Australia moves towards major system changes and enhancements in healthcare, it should be borne in mind that it is sometimes more cost effective to define and move towards the desired end point more quickly to reduce effort and maximize benefits. It is hoped that this Standard will be used by managers to encourage improvement in their systems, and that software vendors will take the opportunity to introduce change into their system that are most effective at the time for lessening the costs and maximizing the potential of their systems.

STANDARDS AUSTRALIA

Australian Standard

Person and provider identification in healthcare

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

1.1.1 Scope and general

This Standard defines the requirements for quality, sustainable and accurate identification of individuals (clients and providers of healthcare) and organizations in healthcare. It considers the issue of identification as well as the systems (computerized and manual) used to support identification. This Standard covers all identifiers used in healthcare, including but not limited to, national health identifiers.

This document supports workflow in the clinical and administrative environments of healthcare. It specifies not only data components, but also key procedures to support quality identification practice and management in a healthcare environment.

This Standard is primarily concerned with identification of three groups, which are—

- (a) clients of the healthcare system or potential clients of that system, or carers for a client;
- (b) providers of services in the healthcare system; and
- (c) organizations that provide healthcare services.

NOTE: This Standard defines organizations far more broadly than the definition used by the National Health Identifiers Service.

This Standard recognizes the different identifying information used in different settings, and can be applied to the identification of all individuals, patients, providers of services collection, use and application of identifying information, and includes definitions of data elements to support the identification of individuals, people, providers of healthcare services and organizational providers.

This document does not provide technical implementation guidance on concept representation conversion from data presentation/collection to information exchange. Details of maps for this purpose will be provided in an update to the handbook HB222.

It does include reference to these data elements in Australia's metadata registry (METeOR) as part of the Standards Australia Identification Standard Data Set.

This Standard also specifies compliance requirements for the workplace and those who work in and with identification of individuals. The skills and practices required for the development, collection, governance and ongoing management of identifying information, including identifiers from the multiple sources required in today's interoperable environment. This includes processes for supporting national, multinational, state or local level identifiers. IT system compliance requirements are not included here.

This document defines both the minimum dataset required for unambiguous identification, and additional data elements that may prove useful when identifying an individual or organization in different healthcare settings.

NOTES:

- 1 Situations in healthcare require variations in process and data elements, and serious consideration should be given to the components appropriate to the situation. Such situations include the following:
 - (a) *Unusual identifying information is required* Example: A district nursing service where clients contact the service by phone may find the phone number a useful identification search component.
 - (b) *Multiple identifiers are required* Example: Where a hospital has a large store of paper based patient records, existing local identification numbers need to be maintained to supplement the existence of a national identifying number and system in Australia. This Standard makes provision for computer systems to identify the national number for information communication and exchange, as well as the number used for other specific purposes, such as local filing or reporting to an insurance company.
 - (c) *Identifying information to indicate when providers practise in multiple locations* Example: Patients from remote areas who initially seek healthcare in a location far from home can be referred to medical practitioners who work in their local area. (It is recognized that applications such as provider directories or service locators will require more information than that included in this Standard, but this Standard provides a consistent basis for this functionality.)
- 2 This Standard provides an application-independent generic set of identifying information and is technology agnostic. It recognizes that many existing Australian systems do not currently meet the Standard, but that improved systems and processes are needed. This document supports ongoing improvement of systems and to identify requirements to be evaluated when systems are purchased or reviewed.
- 3 There are additional factors to be considered in providing access to people's data, including privacy, security and data transfer mechanisms. Although these requirements are considered in this Standard, the processes and governance requirements associated with access are outside the scope of this Standard. Authorization of data access is determined by the application of legislation, organizational policies and guidelines, and professional ethics.

If permitted by law, data matching may be undertaken in a variety of contexts and settings, including for administrative purposes.

1.1.2 Exclusions

It is important to note that although this Standard includes data elements required to identify or support the identification of individuals, common demographic data used for statistical analysis such as indigenous status are not included, and should be referenced as required for the Data Set Specification relevant to reporting requirements. The ability to record details related to non-specific addresses is covered but the statistical collection of 'no fixed abode' is not. Technical information system conformance requirements are not specified here.

The representation of concepts for identification in information exchange are covered in AS 4700 series of standards and maps for conversion of data from presentation mode to information exchange mode are in development.

1.2 OBJECTIVE

The objective of this Standard is to identify the functionality required to meet the demands of an electronic health record-enabled and interoperable environment in healthcare.

This Standard is also intended to—

- (a) present a technology agnostic solution to support personal and organizational identification in an interoperable e-health environment;
- (b) present a future focused solution that is designed to reduced ongoing technology support costs through reducing the needs for system change; and

- (c) support identification throughout healthcare, from administrative to clinical and re-use requirements.

NOTE: Implementation of the requirements identified in this Standard are designed to ‘future proof’ Australian systems by providing generic solutions that can be re-used as the health environment changes its needs for identifiers and identity management. The Standard includes usage information to assist decision making on system requirements suited to implementation.

Further, this Standard is intended to promote uniform good practice in—

- (i) the identification of individuals and organizational healthcare providers;
- (ii) the identification and assessment of data elements required to support identification of individuals and providers;
- (iii) the recording of identifying data;
- (iv) the recognition of the cultural requirements of identity management in a multicultural country;
- (v) the collection and use of identifying information, recognizing the need for sensitivity in these practices; and
- (vi) the association of identifying data with the appropriate individual or provider, and no other, upon which clinical communication and data aggregation are based.

1.3 APPLICATION

This Standard is intended for use by health and health related establishments that create, use or maintain records on individual clients and healthcare providers. This Standard should be used in such establishments where appropriate for collecting data when individuals or providers are registered.

This Standard is intended to assist managers of health information services, those responsible for the development or maintenance of identification systems or software, and managers assessing the functional requirements of systems to be installed in their organization.

This Standard is designed to improve identification in healthcare. It is acknowledged that occasionally the metadata provided and identifiers used will mismatch and be associated with the wrong entity. The specification is designed to reduce the occurrence of duplications and mismatches, and to support consistent mechanisms to find and handle this occurrence within and across systems.

This Standard also provides guidance on skills and responsibilities for those who manage identification systems or services in healthcare organizations.

This Standard is primarily for the use of the following:

- (a) Accreditors of hospitals and healthcare organizations.
- (b) Healthcare organization administration responsible for provision of the development, implementation and review of the person and provider identification system, including policies, procedures, reporting, investigation, change management or protocols, or a combination thereof.
- (c) Managers responsible for systems and staff that collect identifying information and prepare procedures for client identification practice (e.g. health information managers, practice managers, patient services managers and departmental managers that identify clients).
- (d) Developers of large or small health data collections and software products which—
 - (i) assign identifiers;

- (ii) support processes to retrieve potential matches to identifying information, to ensure that all potential matches are retrieved and differentiated between effectively;
 - (iii) track or support identification best practice follow up, merging and unmerging functionality; and
 - (iv) communicate identifiers or identification to other computer systems or organizations.
- (e) Developers of integrated health data collections where there is a need to identify clients and service providers across time or services, and to match a presenting personal information with information held in an existing system.
 - (f) Government agencies responsible for procedural improvement particularly related to identification.
 - (g) Educators of those responsible for the management of identification systems in healthcare.

Though not a primary user, the health consumer is also a vital interested partner in the process of identification. SA HB 222, *Person and Provider Identification in Healthcare Handbook*, recognizes the need to establish procedures that support the business processes, as well as the expectations and obligations of and to health consumers.

NOTE: Several Clauses in this Standard have particular application to individual sectors of this audience. The optional data elements in this document may be more useful to some members of the audience, and may support decision making and practice. For example, they may be useful to those responsible for the design and implementation of identification systems.

Further, this Standard addresses the use of generic approaches to number registration, names and demographics, and ‘future proof’ design structures, which may also be of use to those responsible for the design and implementation of identification systems.

This will assist identification in an environment where identity is established locally and nationally, and also identification by organizations outside the individual healthcare facility. The information structure and the rationale and processes supported by it should be understood by all responsible for selection, design or implementation of health information systems. The larger the organization and the larger the population serviced by that organization, the more important these features become.

1.4 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

AS

- 4700 Implementation of Health Level Seven (HL7)
- 4700.1—2006 Implementation of Health Level Seven (HL7) Version 2.5, Part 1: Patient Administration
- 4700.2—2012 Implementation of Health Level Seven (HL7) Version 2.4, Part 2: Pathology and medical imaging (Diagnostics)

AS ISO

- 8601 Data elements and interchange formats—Information interchange—Representation of dates and times

ISO

- 1087 Terminology work—Vocabulary
- 1087-1 Part 1: Theory and application

ISO/TS

- 22220 Health Informatics—Identification of subjects of health care
- 27527 Health informatics—Provider identification

Data representations have been referenced from the following:

ABS Australian Bureau of Statistics

METeOR Health Standards Data Repository

Australian Institute of Health and Welfare

Naming Systems Centrelink, 1997, *Naming Systems for Ethnic Groups: Ethnic Names for Ethnic Groups Condensed Guide*. Centrelink, Canberra, Australia: Australian Government Publishing Service, 1997.

NOTE: See Appendix A for additional information on these and other related documents. Appendix A also lists documents for informative purposes.

1.5 DEFINITIONS

For the purposes of this document, the following terms and definitions apply.

NOTE: Individual data elements are defined in subsequent Sections. Definitions of components of the data element structure are listed in Clause 1.10.

1.5.1 Business entity

Legal, formally recognized organization.

NOTE: Business entities include corporations, companies and private businesses. This entity holds details of the formal 'owner' entity of an organization.

1.5.2 Capture

Synonym: data entry.

Deliberate action that results in the registration of a record.

NOTE: In this case the term applies to data capture into an individual or provider record keeping system.

1.5.3 Healthcare person identifier

Unique number or code issued for the purpose of identifying a person in healthcare.

NOTE: The identifier is often used for physical purposes such as retrieving or identifying paper based information, as well as for supporting computer based communication. Healthcare identifiers, by themselves, establish a level of identification, though it is common practice to include additional confirming information when displaying or sharing identifying information.

There are many names for and types of healthcare identifiers, including—

- (a) unique patient identifier;
- (b) record number;
- (c) unit record number (UR number);
- (d) Australian national Individual Healthcare Identifier (IHI); and
- (e) Australian national Healthcare Provider Identifier—Individual (HPI-I).

1.5.4 Healthcare provider

Synonym: provider.

Any person or organization involved in or associated with the delivery of healthcare to a person or with caring for a person's wellbeing.

Examples: clinician, hospital, individual healthcare provider and healthcare organization.

1.5.5 Healthcare provider identifier

Unique number or code issued for the purpose of identifying a healthcare provider.

NOTE: Healthcare identifiers, by themselves, establish an adequate level of identification, though it is common practice to include additional confirming information when displaying or sharing identifying information. There are many names for and types of Healthcare Provider Identifier, including—

- (a) provider identifier;
- (b) unique provider identifier (UPI);
- (c) Australian national Individual Healthcare Provider Identifier (HPI-I); and
- (d) Australian national Healthcare Provider Identifier—Organisation (HPI-O).

1.5.6 Identification

Process of using claimed or observed attributes of an entity to single out the entity among other entities in a set of identities.

NOTE: This includes information exchange between and within computer systems, and the processes used when a person evaluates information about the individual. Identification therefore includes—

- (a) associating the individual person or organization with the multitude of unique identifiers used in systems, so as to collect and retrieve information about that individual or organization in a consistent and accurate manner;
- (b) collecting and maintaining current, accurate information about the individual or organization and related datasets to support the process of identification;
- (c) the processes used to find an individual or organization's unique identifiers when required, including in emergencies, in order to support effective, safe care and deliver the benefits of information availability; and
- (d) supporting information exchange using unique identifiers.

1.5.7 Individual

Single discrete entity.

NOTE: This includes a distinct person (defined here as a person or individual provider) or organization. The term individual is used throughout this document to mean a single instance of a person or organization.

1.5.8 Individual healthcare provider

Any person who provides or is a potential provider of a healthcare service.

NOTE: An individual provider is an individual person and is not considered to be a group of providers (e.g. a clinician). A clinician or organization may be registered to provide services but not actually providing them as yet, in which case they are a potential provider.

Synonym: individual provider.

1.5.9 Organization healthcare provider

Organization involved in the direct or indirect provision of healthcare services to an individual or to a population.

Examples: hospital, community health centre, general practice, health insurance provider.

Synonym: organization, health organization, healthcare organization, Health Delivery Organization (HDO).

1.5.10 Person

Human individual.

NOTE: This may be a patient, subject of care, health consumer, healthcare client, agent acting on behalf of another person, or individual provider of a healthcare service.

1.5.11 Record

Information—in any format—created, received or maintained by an organization or person in the transaction of business or the conduct of affairs, which is kept as evidence of such activity.

[Adapted from ISO 15489-1.]

1.5.12 Record keeping

Function of keeping records for future retrieval and use.

1.5.13 Registration

Act of recording identifying details about an entity in a record keeping system.

NOTE: In this document, this refers to giving a unique identity to a person or organization. This process is generally intended to establish a unique identity in that record keeping system.

1.5.14 Shall

Indicates that a statement is mandatory.

1.5.15 Should

Indicates a recommendation.

1.6 REGULATORY ENVIRONMENT

Healthcare establishments reporting to government agencies should refer to the National Health Data Dictionary (this is available via the METeOR website at <http://www.meteor.aihw.gov.au>), and Commonwealth and state/territory reporting requirements for data element specifications, if relevant. The data elements and value domains included in this Standard are represented in METeOR as the Australian Identification Standards data set.

In order to ensure compliance with personal privacy in the collection, use, record keeping and disclosure of individual or provider healthcare information, relevant privacy legislation (which may include national or state/territory legislation), codes of fair information practice and other guidelines, shall be referred to the Office of the Australian Information Commissioner (OAIC). Local requirements and local privacy legislation should also be considered.

Further, there is a duty of care requirement, which requires consideration along with privacy requirements. In other words, each organization has an equal responsibility to protect privacy and use the individual's information to find the appropriate healthcare record if the individual has such a record in that organization.

There is no comprehensive privacy legislation covering both the public and private sectors across Australia, so users should consider their particular set of circumstances (i.e. location and sector) and whether privacy legislation covers those circumstances.

NOTE: A consistent national approach to privacy throughout Australia has been developed to cover private and public information. The Office of the Information Commissioner website can be referred to for assistance in complying with privacy obligations (<http://www.oaic.gov.au>).

1.7 RELATIONSHIP TO NATIONAL HEALTHCARE IDENTIFIERS SERVICE

The Australian Healthcare Identifiers (HI) Service is funded by all Australian governments and is a foundation element of the broader eHealth system. This service is underpinned by the *Healthcare Identifiers Act 2010* (the *HI Act*), the *Healthcare Identifiers Regulations 2010*, the National Partnership Agreement on E-Health, and the service level agreements between the National E-Health Transition Authority (NEHTA) and the Australian Government Department of Human Services.

The HI Service provides services to the health sector that will assist in being able to identify individuals (patients and healthcare providers) and organizations involved in the receipt or provision of healthcare. This service is in evolution and is likely to change over time. The HI Service uses a unique 16 digit identification numbers. However, these are not the only identifiers used in healthcare, nor do they necessarily replace the use of local identifiers in individual healthcare organizations.

The *HI Act* restricts the way in which the national identifiers and the HI service can be used and specifies three types of national healthcare identifiers—

- (a) *Individual Healthcare Identifier (IHI)* for individuals receiving healthcare services;
- (b) *Healthcare Provider Identifier–Individual (HPI-I)* for healthcare professionals involved in providing patient care; and
- (c) *Healthcare Provider Identifier–Organisation (HPI-O)* for organizations that deliver healthcare (such as hospitals or general practices).

The HI Service Operator is authorized under the *HI Act 2010* to assign IHIs to individuals and disclose IHIs to healthcare providers for the purpose of providing healthcare. In addition, strict privacy laws under the *Privacy Act 1988 (Commonwealth)* govern how these identifiers can be used.

This Standard has much broader requirements than the requirements for the HI service, but is intended to be usable alongside the service.

1.8 CONSIDERATIONS FOR SYSTEM DESIGN

This Standard specifies the data and processes (manual and computer supported) required for supporting safe, quality based identification of individuals and organizations in healthcare.

NOTE: When a software solution or a manual process is evaluated, the specifications in this Standard should always be considered, but in addition it should also be recognized that there are other requirements—such as audit, privacy and access control requirements—not yet specified in standards. Additional requirements to support audit, privacy and access control are not included in this Standard but should be included in the consideration of any identification system.

The data and system design components in this Standard are designed to support the functionality necessary in a local system, particularly where that system operates in a shared health information environment such as that being progressively implemented in Australia to support e-health and electronic health records. For this reason, this document includes some concepts that are not in pre-existing (legacy) systems, and that may not seem relevant to those who have used organization based patient master index systems.

NOTE: Before the decision is made not to implement any component, consideration should be given to the reason for inclusion of that component and the utility it supports. Such requirement or reason may not be obvious if only the operation and requirements of legacy systems are considered.

The principles for the design of the system are based on the following:

- (a) *Quality and safety requirements* The Australian Commission on Safety and Quality in Health Care has identified a patient identification and procedure matching Standards in its publication National Safety and Quality Health Service Standards.

This work stipulates the importance of identification to safe clinical practice, and the processes and requirements of this reference are supported by the content of this Standard. This Standard identifies additional procedures and recommendations to support safe identification which are practical and within the spirit of the recommendations of the Australian Commission on Safety and Quality in Health Care.

Considerations of safety as it applies to the use of organizational identifiers should also be in place.

- (b) *Clinical requirements* Identification is not only an administrative and IT system requirement; it also has clinical importance. The need, for example, to use the name associated with a person (rather than the 'formal' name) is not only a matter of respect, but also supports clinical practice (such as the ability to judge a patient's recovery after anaesthesia by using the patient's name). Identification systems become clinically vital in an emergency situation. Systems are required that not only meet administrative identification constraints, but also support the reality of how people are identified in their life in order to meet all of these needs.
- (c) *Multisite requirements* Identifiers are used in computer systems but are also used in paper based systems. Changing paper based record keeping systems and their identifiers when exchanging information should be avoided to reduce cost and time in conversion, even given the existence of a shared identifier such as a national or state identifying number. Computer technology and this Standard support the concept of a person with an index of identifiers being used for a range of purposes in a range of places and organizations, in the same way that a person may have more than one name by which that person is commonly known for very valid reasons.

Although this Standard is based upon existing Standards for identifying information (including AS/NZS 4819), the requirements of e-health have extended the information needed to areas where these existing documents did not offer support for the needs of healthcare.

1.9 COMPONENTS OF IDENTIFICATION

This Standard identifies the data elements that are most likely to affect the ability of individuals and systems to identify an individual or an organization from a potentially large set of individuals or organizations in a way that recognizes the variations in the identification process required in a healthcare environment. The elements each provide guidance on the collection and design of quality identifying data.

Identification in healthcare includes the identification of people as clients of the health service and of providers as individuals and organizations. This requires a combination of attributes which describe the individual and together offer unique information about that individual. When communicating between computer systems or organizations and when referencing files of information about an individual unambiguous identification is enabled by the use of unique identifiers. Unique identifiers can be allocated by national or state authorities, by the individual healthcare organization (i.e. the record number), or even by departments within an organization (e.g. the diagnostic service numbers). This Standard supports the concept of an index of identifiers that allows the use of multiple identifiers for a given entity.

Identification has two essential requirements, as follows:

- (a) A unique identifier shall be associated with an individual. This requires the establishment of appropriate attributes that can be used by people and systems to identify the individual. These often need to be specific to the clinical situation and client community. This identifier is not the national healthcare identifier which is used for communication only.
- (b) The unique identifier used in the organization shall be used in communication about or with an entity and the relevant Australian national Health Identifier should also be included if available.

Robust collection of defining metadata underpins the process of identification, in addition to this multiple identifiers are also required to support unambiguous identification. Identifiers should not be used in the absence of supporting identifying information even in a computer environment. Validation of identifying information and identifiers is required in all situations.

Personal characteristics such as name, address, date of birth, sex, field of practice and electronic communication details (e.g. phone, fax or email address) are an important part of the manual association of the individual with the identifier. From a system design perspective it is important to recognize that it is always the person or the provider that is the core element in identification, not the attribute elements or the identifier/s used (which may change over time).

Identifying information may be sensitive. This information shall accordingly be protected. It may be a difficult task to retain the capacity to identify an individual accurately while retaining the privacy of that individual. Although there are some commonly used attributes, and some required for the Health Identifiers Service, it is not possible—or recommended—to select additional specific data elements suited to this task over others, other than to recognize that the data elements used for identification need to be selected to suit the individual healthcare environment and data reasonably available from the patient or those accompanying the patient (in the case of patient incapacity such as an emergency).

NOTE: The registration of providers may not require the use of as extensive a range of individual identifying elements as those for individuals in the general community (largely due to the smaller set within which the individual is identified). Organizational providers have address and electronic communication information of similar structure to that of individuals. The other data used to describe these entities are described in full.

1.10 CONFORMANCE REQUIREMENTS

The requirements for information technology conformance to support identification information exchange, particularly as it relates to the national identification systems are not covered in this document. Section 11 of this document provides details of workplace procedural practice required to represent conformance with this Standard. That Section also defines the skills which all those who work in identification of individuals or organizations in healthcare shall possess.

1.11 DATA ELEMENT STRUCTURE

1.11.1 General

Each data element has been defined in this Standard from a business perspective, and the definition includes specifications for display requirements for data. In addition, a set of metadata components based on AS ISO/IEC 11179.3 has also been used to allow the data to be included in the Australian Health and Welfare Metadata Register (METeOR).

NOTE: The data elements in this Standard will be included in METeOR as part of the Standards Australia Identification Data Set.

The METeOR identifier has been provided where one is available. Data elements that relate to the internal record keeping of data have not been provided, as these are dependent upon vendor systems.

These data elements are described to support manual identification processes as well as technical requirements. In earlier versions of this Standard the concept of value domain was included, and this has been extended by a clear statement of the value domain and rules to be applied.

The following are some of the metadata included in this Standard:

- (a) *Field size maximum* This data element is included only to meet the requirements of METeOR for use in national data collections, rather than for specific identification purposes.

- (b) *Display layout* Although elements of representational layout such as text, character and number are still included, the main requirement is to clearly display information consistently. This Standard specifies display information layout which is important for confirming identity by evaluating an individual's or organization's details. Data exchange specifications are provided in relevant AS 4700 Standards.

NOTE: All data elements defined in this Standard are single use fields. Such fields shall be used to collect only the data specified in the way described here. It is known that this has not been the practice in the past, but in an interoperable healthcare environment singular and consistent use of information is essential.

1.11.2 Data element definitions

The following is a list of metadata terms used to describe the fields referred to in this Standard.

1.11.2.1 Collection methods

Comments and advice concerning the actual capture of data for particular data elements in order to achieve uniformly high quality data.

NOTE: Healthcare establishments reporting to government agencies should refer to the National Health Data Dictionary, and the Commonwealth and state or territory reporting specifications, if relevant.

1.11.2.2 Comments (optional)

Any further information relevant to data element collection or record keeping.

NOTE: In current and legacy systems it was common to create a new record (and with it new identifier/s) when a person's details could not be found in the existing system. Although this offers protection against using incorrect data and supports the privacy of individuals, it does not support best healthcare for the individual in general.

This Standard is designed to provide the desired state, and for this reason that this Standard includes data elements and processes that do not exist in single organizational identification systems, but have been included to support future integrated approaches to identification of individuals and organizations in healthcare.

1.11.2.3 Definition

Representation of a concept by a descriptive statement which serves to differentiate it from related concepts (ISO 1087-1:2000, Clause 3.3.1).

1.11.2.4 Display representation

Optional presentation that identifies the way an element should be displayed in order to support consistent and clear meaning of the data element when displayed, printed or represented for human consumption.

1.11.2.5 Guide for use

Additional guidance to inform the use of the data element. Details of data collection, examples and usage are provided in the Handbook associated with this Standard (SA HB 222).

1.11.2.6 ISO 11179 data type

The way the data is to be physically represented if it is to be considered valid.

NOTE: The data types given here are those used within METeOR (consistent with ISO 11179). They are not those often referred to as the ISO data type (ISO 21090) used in HL7 messaging. SA HB 222, *Person and Provider Identification in Healthcare Handbook*, is being redeveloped to include maps from data collection representation, representation for National Data Sets (where relevant) and HL7 messaging requirements. In this document the ISO 11179 data types used are:

- (a) *Numeric (N)* Only numerals can be included—no punctuation or alphabetic characters. Number data types are only used when the content is used in arithmetic calculations. That means an identifier—even if it is made up of numerals—is an alphanumeric field (restricted to allow only the numerals).
- (b) *Alphanumeric (AN)* Numerals, alphabetic characters and ASCII punctuation are all permitted.
- (c) *Alphabetic (A)*, alphabetic characters only, no punctuation or numbers.
- (d) Dates and Times.

1.11.2.7 METeOR identifier

METeOR is Australia's repository for national data Standards for the health, community services and housing assistance sectors. Details of each data element are maintained in this repository.

1.11.2.8 Source documents

Details of Standards or guidelines for data elements that have been cited in this Standard.

NOTE: See Appendix A.

1.11.2.9 Synonym

Alternative name(s) for this data element.

1.11.2.10 Value domain

ValueSet in HL7.

The set of codes used to represent this data.

Synonym: value domain in METeOR.

NOTE: When a data element is free text, the value domain will be blank and the data type may be indicated as alphanumerics. The verification rules will indicate any limitations on the value domain or the free text content. For each data element that is represented using a value domain, a code value is provided, and a descriptor of the code value and an alternative code for display purposes may also be given. The code should be used for communication of this data value; the descriptor is the title of the code value, and the alternative code is provided for collection of the data, where the use of alphabetic code values is preferred at the point of data collection or for screen viewing.

The following example shows value domain codes for the data element Sex:

EXAMPLE VALUE DOMAIN FOR SEX

Code (for presentation)	Descriptor	Value Domain codes in METeOR
M	Male	1
F	Female	2
I	Intersex or indeterminate	3
D	Indeterminate	3
O	Other	8
N	Not stated/inadequately described	9

1.11.2.11 Verification rules

Quality control mechanisms that restrict the collection, record keeping or transferral of invalid codes.

1.12 SUMMARY STRUCTURE

People, whether they are patients, consumers, healthcare clients, agents or providers, share many elements of data. Each has identifiers, names, demographic details, addresses and electronic contact information. This Standard first lists the data elements to describe people in each of these classes of information, explaining the relationships between them, and which elements are required and which are optional. Second, this Standard lists those data elements that are specific to individual providers or to provider organizations.

Data components headings described in this Standard are summarized in Figure 1.

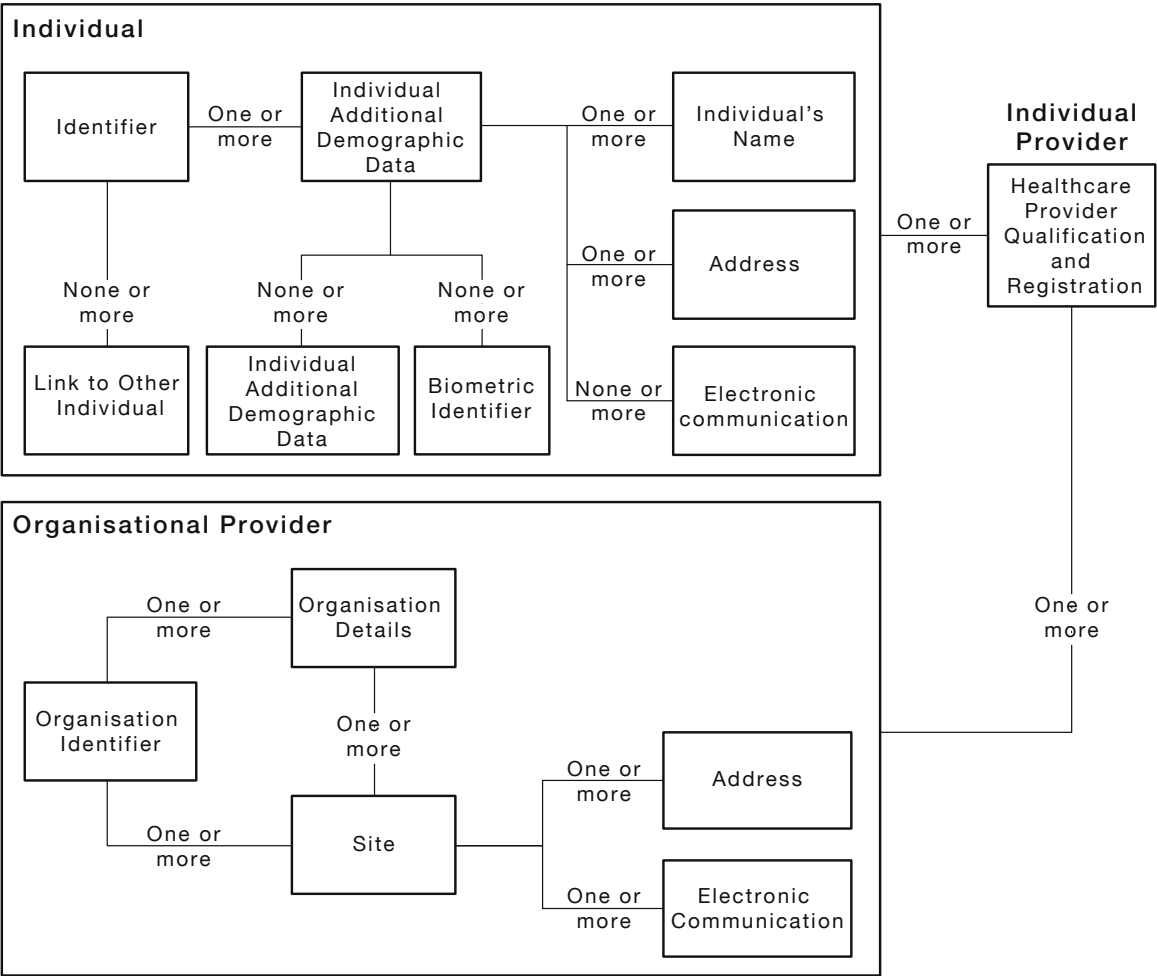


FIGURE 1 INDIVIDUAL AND ORGANIZATIONAL IDENTIFICATION STANDARD COMPONENTS

Figure 1 shows a high level picture of groups of metadata to represent individuals and organizations. The individual has one or more identifiers, names and addresses, and other information that may be part of the individual's identification includes biometrics, links to others and electronic communication elements. This diagram is not intended to represent an information model, but to introduce these broad identifying components.

For example, the 'Other identification details' group include concepts such as sex, date of birth, date of death which are not shown in detail. Individual providers have the same core elements as individuals and information about at least one field of practice, and in some cases also have relationships to organizational providers, which have additional information such as organizational details (including name/s), organizational identifiers and organizational sites of operation (including name)—each detail of which may change over time.

For example, in a district nursing service it may be most effective to have a system that recognizes the phone numbers of patients, to assist in identifying confused or seriously ill patients over the phone, while a general practitioner's receptionists may know the individuals serviced by the clinic personally and find identification a much simpler process, with a name being sufficient. In a large hospital where individuals may be highly stressed when they arrive in the emergency department, it is necessary to be able to use a wide variety of identifying attributes and potential alternative identifiers (such as a GP's record number), including information available from colleagues, family members and others who may be accompanying the ill person. When identifying individual providers there is a need to consider that families often work together and nicknames are often used to differentiate between two family members with similar names.

Figure 2 expands the details for individuals, showing the more detailed classes of information included in the identification of an individual.

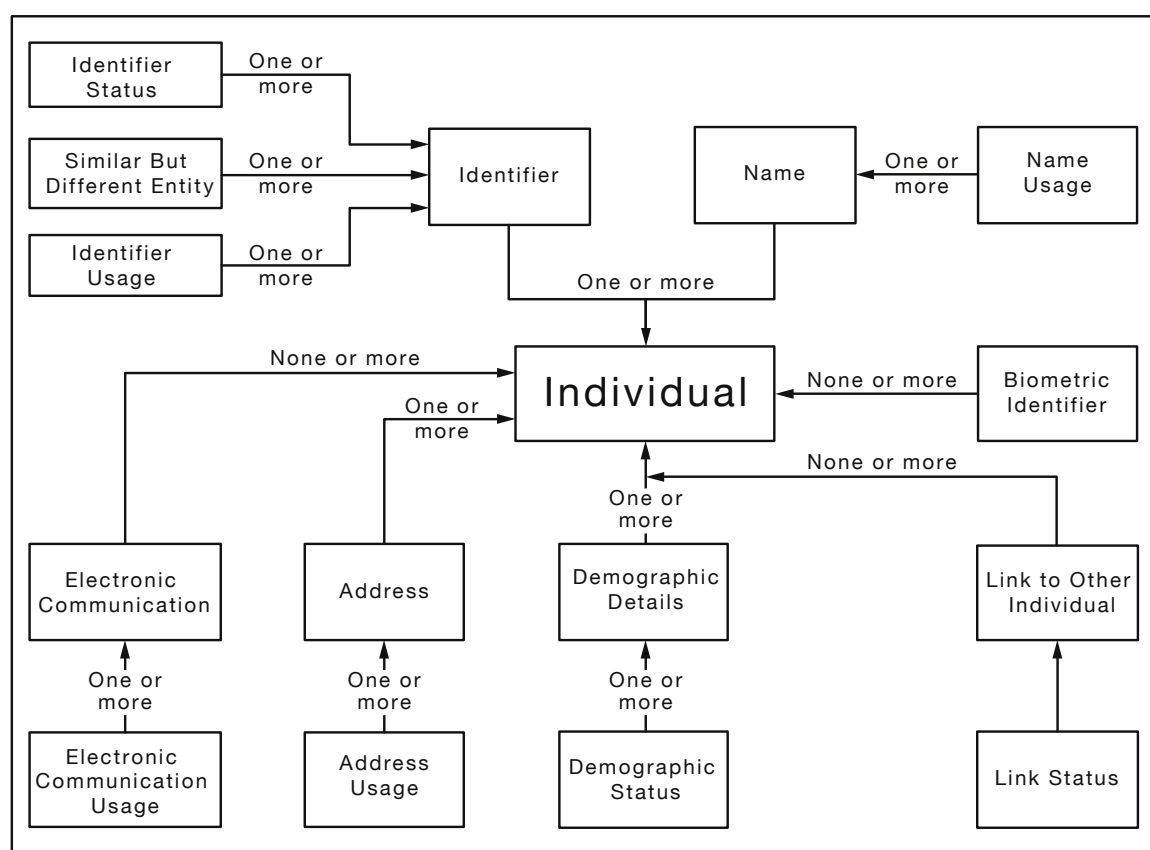


FIGURE 2 INDIVIDUAL DATA GROUPS

1.13 GENERIC VALUE DOMAINS

There are value domains and data collection rules that apply to more than one data element. These values are described in one instance only in Section 2 (e.g. Clause 2.2.2, Date), but apply to any occurrence of these elements. Within all identifier data components the Date Accuracy Indicator is a generic value domain which is used consistently to represent the following data elements:

- (a) Date (and its components).
- (b) Address (and its components, e.g. the date of address activation or change).
- (c) Electronic Communication (and its components, e.g. the date of communication activation or change).
- (d) Organization (and its components, e.g. the date established).

1.14 BENEFITS OF POSITIVE IDENTIFICATION

1.14.1 General

The benefits of positive identification of individuals, providers and organizations in healthcare lie in four areas—clinical care, communication, administration and to a lesser extent secondary uses.

Positive identification can deliver the following benefits to clinical care.

1.14.2 Improved clinical care

Positive identification improves clinical care as follows:

- (a) Positive identification provides a complete and accurate record (the right information about the right person).
Provision of access to complete and accurate information about individuals and their care through accurate association of clinical information, on which potentially life-critical clinical decisions may be based.
- (b) It ensures that the individual is accurately and respectfully referred to by name and situation, and reduces the duplication of diagnostic testing and prescribing.
- (c) It verifies information about individual providers to confirm their capabilities and qualifications (e.g. their professional specialty or registration with accredited bodies).

1.14.3 Improvement in time management of the identification process

Positive identification improves time management as follows:

- (a) It reduces the inconvenience to patients and carers during the identification process.
- (b) It improves the access to services, offered in a simple and efficient manner through access to accurate information about care and service providers, including support for patient referral.
- (c) It improves communication by offering—
 - (i) the ability to communicate confidently with other healthcare providers and healthcare systems for ongoing patient care;
 - (ii) computer to computer communication, often supported by eSignatures, which should apply the structures and concepts defined in this Standard; and
 - (iii) unique identifiers and associated metadata that support routing of clinical and other data within healthcare systems.

1.14.4 Improvement in administration

Positive identification can improve administration by offering—

- (a) the ability to provide reliable information about services offered by individual or organizational healthcare providers to clients;
- (b) a source of reliable information to support access, authorization and security systems, and enhance provider and consumer confidence in electronic health records;
- (c) the ability to audit who has added to, changed or accessed electronic records for quality, access and privacy audits; and
- (d) the ability to ensure the efficient and appropriate payment of fees, rebates, etc.

1.14.5 Secondary use, positive identification

Secondary use, positive identification supports the use of—

- (a) provider data for purposes such as workforce planning and resource allocation;
- (b) individual information for the purpose of healthcare service planning, public health and epidemiology, within the limits of privacy; and
- (c) improvement in care quality by supporting professional practice reviews, research on care delivery patterns and outcomes, etc.

The benefits listed above translate into safer and more efficient healthcare. In addition to these benefits, unambiguous identification of healthcare providers and organizations also supports—

- (i) the requesting and reporting of orders, tests and results (e.g. pathology and diagnostic imaging);
- (ii) other communications and referrals between healthcare providers regarding ongoing care of patients (e.g. a referral from a GP to a specialist or a hospital discharge plan);
- (iii) reporting on healthcare provision to statutory authorities (e.g. reporting of hospital patient administration systems data to state/territory government health agencies);
- (iv) registration and validation of providers; and
- (v) directories or lists of providers and their service locations for consumer information.

1.15 BARRIERS TO SUCCESSFUL IDENTIFICATION

There are many barriers to successful identification of individuals in healthcare settings, such as the following:

- (a) Variable data quality is influenced by the data collected and the frequency of change in that data. In some environments it is possible to obtain evidence of identity with highly dependable data (e.g. the passport process). Data elements which frequently change (e.g. telephone numbers) might be highly accurate in a given context (e.g. district nursing), but less so in other environments in which the data component is less important to delivery of the service.
- (b) Changes in key identifying information occur over time and may not be updated in all healthcare systems. For example, people may change their address but not notify Medicare, as their reimbursements come directly through their bank accounts and so it is no longer as important to for people to ensure that their address is up to date. For this reason it is important to recognize not only the value of a given data component, but also how it is used in a community and the impact this has on the potential quality and variability of the data component.

- (c) The individual's capacity to provide information can cause difficulties with the successful identification of individuals in healthcare. In a healthcare environment the identification system shall be able to cope with the fact that people's memories and capacity to communicate vary according to their mental and physical capacity, their willingness to seek and receive care, and social factors related to identification. For example, information is often provided by third parties (family and friends) who might know the person by a preferred name rather than by the person's formal name.
- (d) Differing data capture requirements and mechanisms, as well as varying data matching methods, limit the ability to identify individuals in healthcare. This Standard defines the core requirements of systems to suit both the quality and flexibility needs of identification processes in healthcare.

SECTION 2 DATA ELEMENTS — GENERAL

2.1 GENERAL

This Section describes data elements used to identify people and providers in healthcare, whether they are clients, patients, consumers, or individuals or organizational providers of healthcare.

There are a number of types of data elements which recur throughout this Standard. They are described once in this Section as their structure is the same irrespective of the context within which they are used. In the detailed data element descriptions, each of these elements is named, and any specific rules or related information is provided to indicate how the specific data element may vary from the general definition provided in this Section. For example, the Date Accuracy Indicator is always represented the same way as defined in Clause 2.2.3, but the definition for Date of Death Start Date Accuracy Flag will be specific to the context to which it relates.

This Section reduces duplication in this Standard by defining the general concept once, and limiting the information provided about the individual context related data element to that which makes the item different from the general description. For example, each individual date might have different verification rules which are indicated when each field is described, but all dates share similar structure and display requirements.

2.2 DATE GROUP

2.2.1 General

All dates in this Standard are composed of the date and the associated Date Accuracy Indicator.

It should be noted that this Standard provides guidance on the display and capture of data elements required for identification, but does not specify how a computer system should store or communicate this information. The AS 4700 series of standards provides details on the correct communication and information exchange format of these data components.

2.2.2 Date

This is a generic description of any date described in this Standard. In order to reduce duplication within the document the format of dates is described once here and summarized within the bulk of the document. There is no METeOR identifier, as these are specific to a given use, METeOR identifiers are provided for individual data elements when they are listed in the detailed data definitions of the Standard.

Definition	Time stated in terms of the day, month and year
METeOR identifier and title	None
Value domain	DDMMYYYY—this format shall be used for collection and display but record keeping may vary
Display representation	Dates shall be displayed using alphabetic representation of the month. This avoids ambiguity. For example, 3 characters for the month: 31 Jan 2012.
Verification rules	Valid date
Guide for use	For data integrity, data exchange, future data analysis and manipulation of data from diverse sources, the Date Accuracy Indicator shall be able to be collected and applied in conjunction with the date in all instances, so as to ensure accuracy of the data and search processes.

2.2.3 Date Accuracy Indicator

Definition	An indicator of the accuracy of the components of a reported date, as represented by a code.			
ISO 11179 data type	A (Alphabetic)			
Value domain		Day	Month	Year
	UUU	Unknown	Unknown	Unknown
	UUE	Unknown	Unknown	Estimated
	UUA	Unknown	Unknown	Accurate
	UEU	Unknown	Estimated	Unknown
	UEE	Unknown	Estimated	Estimated
	UEA	Unknown	Estimated	Accurate
	UAU	Unknown	Accurate	Unknown
	UAE	Unknown	Accurate	Estimated
	UAA	Unknown	Accurate	Accurate
	EUU	Estimated	Unknown	Unknown
	EUE	Estimated	Unknown	Estimated
	EUA	Estimated	Unknown	Accurate
	EEA	Estimated	Estimated	Accurate
	EEU	Estimated	Estimated	Unknown
	EEE	Estimated	Estimated	Estimated
	EEA	Estimated	Estimated	Accurate
	EAU	Estimated	Accurate	Unknown
	EAE	Estimated	Accurate	Estimated
	EAA	Estimated	Accurate	Accurate
	AUU	Accurate	Unknown	Unknown
	AUE	Accurate	Unknown	Estimated
	AUA	Accurate	Unknown	Accurate
	AEU	Accurate	Estimated	Unknown
	AEE	Accurate	Estimated	Estimated
	AEA	Accurate	Estimated	Accurate
	AAU	Accurate	Accurate	Unknown
	AAE	Accurate	Accurate	Estimated
	AAA	Accurate	Accurate	Accurate
Display representation	The code system represents accuracy for day, month and year, irrespective of the way a date is stored. When a date is displayed a method shall be used to make it clear which components of the date are Accurate, Estimated or Unknown. Vendors may decide to display 00 for unknown or estimated dates, or they may display E in the date, month or year fields where these have been estimated, or U if they are unknown. For example <i>31 Jan 2012</i> (where the Unknown components are italicized and the Accurate components are bold).			
Verification rules	For each date component (day, month and year) the values A, E or U shall indicate the accuracy of that component.			

(continued)

Guide for use	Used to record the level of certainty or estimation applied in recording this date. It is important to record whether a date was estimated or unable to be determined (unknown). Any combination of the values A, E, U representing the corresponding level of accuracy of each date component of the reported date: A = Accurate E = Estimated—when it is not possible to identify the accurate date U = Unknown—follow up is recommended The value domain is not dependent upon the date presentation or record keeping. This data element always represents the accuracy of the day first, then the month and then the year. If Unknown, follow up is recommended to establish the correct information. 'Estimated' should be used when it is not possible to find out the actual date and follow up is not likely to obtain a more accurate result.
Collection methods	This data element should always be used in conjunction with a date field.
Comment	It should be noted that time has not been specified here, but similar principles should be applied when required.

SECTION 3 IDENTIFIERS

3.1 IDENTIFIERS

Although Australia has national individual and provider healthcare identifiers supporting interoperability, the identification of individuals and providers still requires local and purpose specific identifiers and other identifying information to support healthcare needs. Local record numbers supporting file retrieval shall be used and shall be maintained within the global reference environment. Therefore any health identification system shall be able to effectively index the individual to the numbers used to uniquely identify that individual in different situations.

Healthcare has many identifiers collected for any one individual. Computer systems offer efficient and flexible index facilities. The use of a single identifier supports ease of communication about that individual, whether a provider or a consumer of healthcare. The establishment of credentialing relationships between the individual and the many existing numbers used to identify them and their filed records will ensure that existing filing systems do not need to undergo expensive integration and change if only a single identification system is to be used.

The collection of multiple identifiers also supports the situation where a specific number is used for a restricted or specific purpose. For example, the insurance number is used when reporting to insurance companies. The structure provided in this Standard supports this functionality through a generic structure, as represented by the following:

- (a) The data elements identified in Figure 3. The identifier is the core of this group, although it is important to remember that no single identifier should be the core of any system—rather, the person as an entity is the core.
- (b) The identifier status group of data elements, which indicates whether this identifier is active or not at any given point in time, and if not provides details of the identifier that has replaced it.
- (c) The identifier usage, which indicates the intended usage of the identifier. For example, an identifier used to report prescribing for billing purposes to the ID issuer can be determined, while a different identifier from the same issuer can be used to report statistical information. An identifier may have many uses, but shall have at least one use. The intent of this group is to provide flexibility in the way systems use the variety of different numbers in the healthcare system.

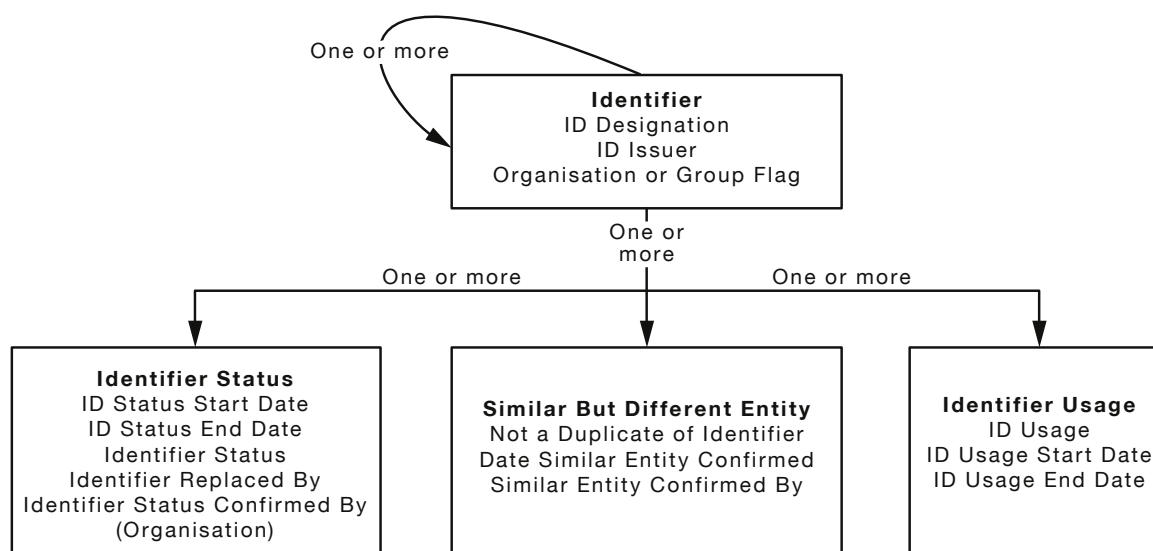


FIGURE 3 DATA ELEMENTS OF IDENTIFIERS

3.2 PRINCIPLES OF IDENTIFICATION IN HEALTHCARE

Five basic principles shall be followed to identify entities in healthcare. These principles can be summarized by the following statement:

No single number or name is more important than any other. Different names and numbers are appropriate to different situations:

- (a) *Principle 1*—There are many identifiers. All identifiers should be triplets of identifier designation, identifier issuer and identifier usage (type) to ensure the number is globally unique.
- (b) *Principle 2*—There are many names for each entity.
- (c) *Principle 3*—There are many addresses for each entity.
- (d) *Principle 4*—Identifiers, names and addresses have specific usage requirements, functions and rules.
- (e) *Principle 5*—Identification of any entity shall not rely upon identifiers alone, that is without additional information.

3.3 PRINCIPLES OF IDENTIFIERS IN HEALTHCARE

The use of identifiers does not imply that all processes and systems can guarantee uniqueness at all times. However, principles of identifiers in healthcare include the following:

- (a) *Principle A*—Identifiers shall be unique to a purpose, and often to a person or organization, although family group identifiers exist and are unique to the family.
- (b) *Principle B*—Identifiers shall not be recycled or re-used.
- (c) *Principle C*—Each person or organization should have a single active identifier from a given issuer for a specific usage at any given point in time.

3.4 HEALTHCARE IDENTIFIER

3.4.1 General

It is common for an individual—whether a consumer or provider of healthcare—to have many identifiers issued by different organizations for different purposes. This structure has been designed to allow systems to manage multiple types of identifiers without the need to change the system structure. This structure reflects the use of many numbers in healthcare, and means that a single generic structure can be used to collect, use and represent a wide range of other identifiers.

The following are examples of existing healthcare client and provider identifiers:

- (a) Person identifier.
- (b) Medical Record Number (MRN).
- (c) Local client identifier.
- (d) Health (care client) identification number.
- (e) Unit Record (UR) number.
- (f) Enterprise identifier.
- (g) Area identifier.
- (h) State/territory health identifier.
- (i) Unique Identifier (UID).
- (j) Unique Health Identifier (UHID).
- (k) Medicare Provider Number.
- (l) Employee number (payroll system number).
- (m) IHI.
- (n) HPI-I.
- (o) HPI-O.

Example: Joe Smith may be known by St Elsewhere's Hospital by the identifiers set out in Table 1.

TABLE 1
EXAMPLES OF IDENTIFIERS

Example	Identifier designation	Identifier issuer GS1 Number or HPI-O	Identifier usage	Group/organizational identifier
Individual Healthcare Identifier—IHI	8003608833357361*	Department of Human Services (Federal)—AUSHIC	110 (individual healthcare identifier)	N
Veteran Affairs number	456891X	8003621566684455*	100—unique identifier of a person for this organization	N
Local record number	113355	8003621566684455*	100 unique identifier of a person for this organization	N
Radiology department number—where the department is part of a larger organization	12345678912	8003621566684455*	410 laboratory services	N
Other client identifier	123456789T	Centrelink	400 special service identifier	N
Family number	4433219A	Medicare Australia	120—family identifier	Y
Medicare provider number	1487087026	Department of Human Services (Federal)	500 individual provider identifier other than the HPI I	N
Healthcare Provider Identifier—Individual	8003619900015717*	Department of Human Services (Federal) (AUSHIC)	112—HPI-I	N

* The HPI-O 8003621566684455 is a Department of Health approved HPI-O that can be used in health informatics Standards. The IHI and HPI-I used here are also numbers provided for use in the Standards and do not represent real numbers. This HPI-O and the other identifiers contain generic information and do not represent the organizations in the table.

Many Healthcare Provider Identifiers could be collected for any one application (and often organization).

Examples of healthcare provider identifiers include—

- (i) staff ID code/employee number;
- (ii) Medicare provider number(s);
- (iii) PBS Medicare prescriber number;
- (iv) public key infrastructure (PKI) identifier;
- (v) Australian Health Practitioner Regulation Agency registration number;
- (vi) Australian Company Number (ACN); and
- (vii) professional organization membership number.

Healthcare providers are issued with identifiers, as individuals practise specific disciplines in Australia. These identifiers may be national, jurisdictional or local (staff identifiers).

Some identifiers assigned by government agencies or other regulatory bodies to healthcare providers may be for quite specific, restricted purposes. Therefore, such identifiers should not generally be used for anything other than these specific, restricted purposes. Examples of Healthcare Provider Identifiers for such purposes include AHPRA profession numbers, healthcare identifier service HPI-Is and HPI-Os, Medicare Australia provider numbers and Pharmaceutical Benefits Scheme prescriber numbers. Legislation may govern how and when these numbers can be used.

Healthcare provider identifiers are used nationally and also within organizations for a wide range of purposes. These identifiers might represent an individual or an organization as a provider of a service. For example, a referral might be to an organization that will provide a service, while an entry in a health record in a local system might be recorded using the individual provider's identifier in the local system. Local systems use employee numbers and identifiers for other purposes, such as professional registration numbers. Other than the national identifier system, healthcare systems shall be able to record all of these identifiers and determine when to use which one for which purpose. Table 2 supplies examples of healthcare provider identifiers.

TABLE 2
EXAMPLES OF HEALTHCARE PROVIDER IDENTIFIERS

Name	Identifier designation	Identifier issuer	Identifier usage	Group/ organizational identifier
Professional registration identifier	MED1234567890	AHPRA	700 professional registration identifier	N
Healthcare Provider Identifier—Individual	8003619900015717*	Department of Human Services (Federal) (AUSHIC)	112—HPI-I	N
Healthcare Provider Identifier—Organisation	8003621566684455*	Department of Human Services (Federal) (AUSHIC)	113—HPI-O	Y
Medicare provider number	XYZ123	Medicare Australia	500 individual provider identifier other than the HPI	N
Medicare internal unique identifier	XYZ12345	Medicare Australia	100 unique identifier of a person for this organization	N

* The HPI-O 8003621566684455 is a Department of Health approved HPI-O that can be used in health informatics Standards. The IHI and HPI-I used here are also numbers provided for use in the Standards and do not represent real numbers. This HPI-O and the other identifiers contain generic information and do not represent the organizations in the table.

The combination of any Identifier Designation, Provider Identifier Issuer and Identifier Usage should uniquely identify an individual within that organization or a specific use case. There are situations when the organization may issue more than one identifier to an individual, each for different purposes. Over time individuals may be issued more than one identifier from an issuer for the same purpose—this is a multiple identifier error. Only one unique identifier should be actively retained in the system. The data components related to identifier status are similar, but different entities are used to manage this situation.

3.4.2 Identifier Designation

Synonym	Individual Healthcare Identifier (IHI) Healthcare Provider Identifier—Individual (HPI-I) Healthcare Provider Identifier—Organisation (HPI-O) Unit record number (UR number) Medicare number Provider number File number Employee number Registration number
Definition	Number or code assigned by an organization, establishment or agency that is used to uniquely identify an entity in healthcare. A recognized organization could include a healthcare provider organization, a professional registration board, a regulatory authority, an insurance agency, government or an employing organization.
Source documents	ISO/TS 22220 ISO/TS 27527 ASTM E1714-00, Standard Guide for Properties of a Universal Healthcare Identifier (UHID) Also see SA HB 234 for technical implementation guidance.
METeOR identifier and title	466235
ISO 11179 data type	AN (alphanumeric)
Value domain	Identifier code
Guide for use	This information is provided for guidance with identifier designation development in any environment. It is not specific to the Australian Health Identifiers System nor to the Individual Health Identifier but should be used when constructing any identifier used in healthcare. Identifiers shall not be recycled or re-used, but when not active they should have an identifier status of R inactive. Some number issuers have specific structures for this value domain. Some of these are listed following this Section. Where such rules governing valid identifier structures exist, they shall be used. ASTM E1714-00 should be used as a guide to the properties of an identifier. It shall be noted that although this is a unique identifier, the identifier is only unique within the purpose for which it was issued by the organization responsible for issuing the number. In other words, a single identifier may exist more than once in a system, but when combined with the other data components of the identifier the aggregate identifier is unique. The triplet combination of the identifier data elements—Identifier Designation, Identifier Issuer and Identifier Usage—uniquely identifies an individual for a specific purpose. Identifier designation should not represent meaning, as this may necessitate a change to the identifier over time if elements of the identifying information used to generate the identifier were to change. The identifier should not be changed. Where new identifiers are being implemented, identifiers should be constructed from numbers (although they should not be a number data type). Individual agencies, establishments or collection authorities allocate identifiers, and some of these have specific rules to be applied when they are processed (e.g. Individual Healthcare Identifier or Medicare number).

(continued)

The following criteria and characteristics of the identifier in healthcare designation are adapted from ASTM E1714–00, and are provided here as a guide to assigning a unique identifier:

Atomic—the designation should be a single data item. It should not contain sub-elements that have meaning outside the context of the entire designation. The designation should not consist of multiple items to be taken together to constitute an identifier.

Content free—the designation should not depend on possibly changing or possibly unknown information pertaining to the healthcare client. Including content in the designation will make it impossible to assign the ‘correct’ identifier if that information is not known. It also leads to invalid situations if the information changes. For example, what happens to an identifier based on sex if the healthcare client has a sex change procedure?

Longevity—an identification system should be designed to function for the foreseeable future. It should not contain known limitations that will force the system to be restructured or revised radically.

Permanent—once assigned, a designation should remain with the healthcare client. It should never be reassigned to another client, even after the healthcare client’s death.

Unambiguous—whether represented in automated or handwritten form, a designation should minimize the risk of misinterpretation. Where using alphanumeric identifiers, care should be taken to avoid confusion of the number ‘0’ with the letter ‘O’ and the number ‘1’ with the letter ‘I’.

Verification rules	For the purposes of identification this field cannot be blank.
---------------------------	--

3.4.3 Identifier Issuer

Definition	Unique identifier of the organization or individual provider that allocated this identifier.
Source documents	HPI-O HPI-I Also see SA HB 234 for technical implementation guidance
ISO 11179 data type¹	AN (alphanumeric)
Guide for use	This is one of the components needed to uniquely identify an individual, by identifying the issuer of each identifier that is used in relation to an individual or organization. Examples include the following: AHPRA issuing profession number for individuals. Healthcare Identifiers Service issuing IHI, HPI-I’s and HPI-O. Electronic identifier (sometimes called a device) including the ABN of the insurance company and the HPI-O of the hospital. The use of the national healthcare identifiers is limited to their use for the identification of individuals and organizations within healthcare, and the use of these numbers should be carefully managed. Medicare Australia, issuing Medicare Provider Numbers.
Verification rules	The identifier shall be a valid unique Healthcare Provider Identifier, and will usually be the identifier of a healthcare organization.
Collection methods	Individual healthcare systems should be able to automatically identify the organization identifier associated with the identifiers they issue. This field is used to collect the organization identifier information, allowing the unique number within the organization to be unique outside the organization as well as within the organization. Vendor software shall automatically generate this element of the number when required for communication purposes.

3.4.4 Group Identifier Flag

Definition	Indicates whether this is an identifier for a group to which this individual belongs.	
ISO 11179 data type	A (alpha)	
Value domain	Code	Description
	F	Family Identifier
	O	Other Group Identifier
	T	Treatment Group
Verification rules	The field may be left blank. It is only used to indicate group identifiers to which this individual belongs.	
Collection method	This field indicates whether the identifier is for a group of people, such as a family or a therapy group.	

3.5 IDENTIFIER STATUS

3.5.1 General

Despite the best processes, errors can be made in registration processes. For this reason, this Standard identifies data mechanisms for management of the circumstances where a number can no longer be used (as it has been replaced by another number) or where multiple registrations have accidentally occurred for a single person. In this case a number can be retired and point to the replacement number.

Number/name registries may have duplicates (multiple registrations for a single individual or organization). Computer systems and manual searching of registries will identify potential duplicates.

This group of data also allows users to identify where they have determined that two identifiers that appear to be duplicates are not duplicated, or to indicate, where identifiers are discovered to be duplicates, which number is retired and no longer used, and which is retained. This process is often called ‘merging’ of records.

Computer systems and manual searching of registries can assist in the identification of potential duplicates. The Handbook associated with this Standard, SA HB 222, identifies strategies to reduce multiple registrations, and to monitor their resolution and reduction appropriately.

3.5.2 ID Status Start Date

Definition	The date upon which this identifier status became effective.
Value domain	Refer to Clause 2.2.2, Date

3.5.3 ID Status End Date

Definition	The date upon which this identifier status is no longer active.
Value domain	Refer to Clause 2.2.2, Date

3.5.4 Identifier Status Code

Definition	Indicates whether this identifier is active or has been replaced.
ISO 11179 data type	Boolean
Value domain	A = Active—this identifier is in use R = Inactive—this identifier is no longer in use (previously called retired)
Guide for use	When duplicated identifiers are found for a given individual, the ‘identifier replaced by’ field shall be completed. In this case it is necessary to indicate which of the identifiers is to be retained and which retired. This status field indicates the identifier that is not actively used for ongoing identification, but is retained in systems to support historic utility. The number that is not actively used is often referred to as retired. Although it is common manual practice not to modify identifiers when a case is active, for example while an individual is an inpatient in a hospital, computer systems should allow this change to be processed as soon as the problem is identified, and manage display and use of numbers during the inpatient stay to support appropriate workflow. It is possible for an inactive identifier to become active again in the future. The identifier status has no directly relationship to the status of the individual. For example, duplicated identifiers continue to identify the individual, even if that individual is deceased or no longer active in the organization or if the individual’s physical record has been destroyed.
Verification rules	Required when the ‘duplicate of’ field is not blank.

3.5.5 Identifier Replaced By

Definition	When an identifier has been retired and is no longer to be used, this is the identifier to be used instead.
ISO 11179 data type	AN (alphanumeric)
Value domain	A valid identifier in the register with the same issuer and usage as this identifier.
Guide for use	This field provides a method of indicating that more than one identifier has been issued to the one entity (person or provider) and that the identifier in this field is the one that should be used, unless that identifier has also been replaced. The objective of this field is to support the manual process of merging records. If multiple numbers (duplicates) are issued and folders are created, these physical records are merged into one new folder, and one of the numbers becomes inactive (it is not reissued or re-used) and one is retained. The inactive number is pointed to the active number in the manual number register. This process mimics that of the traditional manual process. In computer systems all information held with the ‘inactive’ identifier should retain the link to that identifier in the event that an error has been made and ‘unmerging’ is required. In this instance any episodes recorded under the ‘replaced by’ identifier might need to be manually disaggregated.
Verification rules	If this field is used, the ‘Duplicate Confirmed By’ and ‘Date Confirmed’ shall also be entered.

3.5.6 Duplicate Confirmed By

Definition	The identifier of the organization or provider that has confirmed and authorized the retirement of this identifier and the use of the replacement identifier. NOTE: This is used to manage merging processes where duplicates are found, and one is retired and one retained.
Value domain	A valid HPI-O or HPI-I. There might be situations where the issuer does not have one of these, in which case the system will need to identify the organization individually.
Guide for use	This information assists in validating the authenticity of the establishment of identity between the two numbers. The authority of the organization may serve to inform other parts of the healthcare system of a potential duplicate within their systems. Each organization is responsible for management of duplicates and merging.
Verification rules	Required when the 'Duplicate Of' field is not blank.

3.6 SIMILAR BUT DIFFERENT ENTITY

3.6.1 General

Provision shall be made in healthcare identification systems for regular monitoring of new and changed entries which are similar enough to possibly be the same person or organization, for example identical twins or an identically named parent and child. This process could identify people with very similar identifying information where potential duplication was noted in the past, and it has been checked and confirmed that these two entries were not duplicates. In this case it is necessary to be able to indicate clearly that two entries are not actually duplicates and ensure they do not appear on lists of potential duplicates for follow up. The data elements in Clauses 3.6.2 to 3.6.4 support this process.

3.6.2 Not A Duplicate Of Identifier

Definition	When two people or providers have very similar identifying information, this confirms that they are not the same entity and they need not be reported as potentially duplicated.
ISO 11179 data type	AN (alphanumeric)
Value domain	A valid identifier in the register with the same issuer and usage as this identifier.
Guide for use	The identifier entered into this field indicates the identifier of the person who has very similar identifying information to the person represented by this identifier. The objective of this field is to support potential duplicate reporting by being able to identify that the set indicated by this link does not represent duplication, even if each person's information is very similar.
Verification rules	If entered, the 'Confirmed By' and 'Date Confirmed' shall be entered.

3.6.3 Date Similar Entity Confirmed

Definition	The day, month and year upon which it was determined that this identifier does not represent the same person or organization as that indicated in the Not A Duplicate Of Identifier
Guide for use	May have an associated Date Accuracy Indicator.
Verification rules	This shall not be a date in the future.

3.6.4 Similar But Not Duplicate Entity Confirmed By

Definition	The organization or provider that has confirmed that these two individuals or organizations represented by different identifiers are not the same person or organization, despite their having very similar identifying information.
ISO 11179 data type	AN (alphanumeric)
Value domain	A valid provider or organization identifier
Guide for use	This information assists in validating the authenticity of the establishment of identity between the two numbers. The authority of the organization should inform other parts of the healthcare system of a potential duplicate within its systems. Each organization is responsible for management of duplicates and merging.
Verification rules	If this group of data is entered, this field shall be entered.

3.7 IDENTIFIER USAGE

3.7.1 General

Identifiers can be used for specific purposes. For example, it might be necessary to use a specific identifier for billing that is not the same as the organization's normal unique identifier. To ensure the safe and useful operation of healthcare systems, the systems should have the ability to indicate the usage expected of a number.

3.7.2 Identifier Usage

Definition	The code indicating the way this identifier is to be used, where that usage is related to a specific purpose.
Source documents	AS 4700.1—2006, <i>Implementation of Health Level Seven (HL7) Version 2.5, Part 1: Patient Administration</i> . Also see SA HB 234 for technical implementation guidance.
METeOR identifier	Coded value set
Value domain	100 – Unique identifier of a person for this organization (to be used where only one number is used as an identifier by the issuer) 110 – Individual Healthcare Identifier (IHI) 112 – Healthcare Provider Identifier—Individual (HPI-I) 113 – Healthcare Provider Identifier—Organisation (HPI-O) 114 – Virtual smart card identifier (CSP) 120 – Family Identifier 200 – Billing Identifier 300 – Business or Individual Taxation or Social Security Identifier 400 – Special Service Identifier (e.g. diagnostic services) 410 – Laboratory Services 420 – Radiology Services 480 – Other Diagnostic Services 500 – Individual Provider Identifier—other than the national number 600 – Organisational Provider Identifier—other than the national identifier 700 – Professional Registration Identifier 800 – Other 900 – Unreliable

(continued)

Guide for use	This item indicates the situation in which this identifier is used. For example, Medicare has identifiers for individual providers, some of which are used only for diagnostic service ordering or billing, while a different number is used by the same organization for other purposes. This field also allows the system to identify the different status of national identifiers issued by the Health Identifier Service. Where an organization has used only one number to identify the individual, this number should be recorded as the unique identifier for the organization (e.g. AHPRA profession number), although the practitioner may have multiple profession numbers. This data element supports generic functionality to enable the use of the right number for the right purpose, for example the hospital UR number for local reporting, the IHI when reporting to Medicare Australia, or the insurance number when reporting to the insurance company.
Collection methods	These details can be automatically derived as data is collected.

3.7.3 Identifier Usage Start Date

Definition	The day, month and year upon which this usage began or is to begin.
Value domain	For additional date metadata, refer to Clause 2.2.2, Date.

3.7.4 Identifier Usage End Date

Definition	The day, month and year upon which this usage ended or is to end.
Value domain	For additional date metadata, refer to Clause 2.2.2, Date.

SECTION 4 INDIVIDUAL NAME

4.1 GENERAL

Name is a composite data element that is captured through the combination of the data elements set out in Figure 4. These data elements are consistent with ISO Standards, with the exception of the data elements for alternative name representation, as Australia uses only names represented using the Latin alphabet and therefore does not require alternative representational formats.

The components of title, given name/s, family name prefix, family name/s and name suffix are considered to be a ‘Name’, sometimes called a name set or name group.

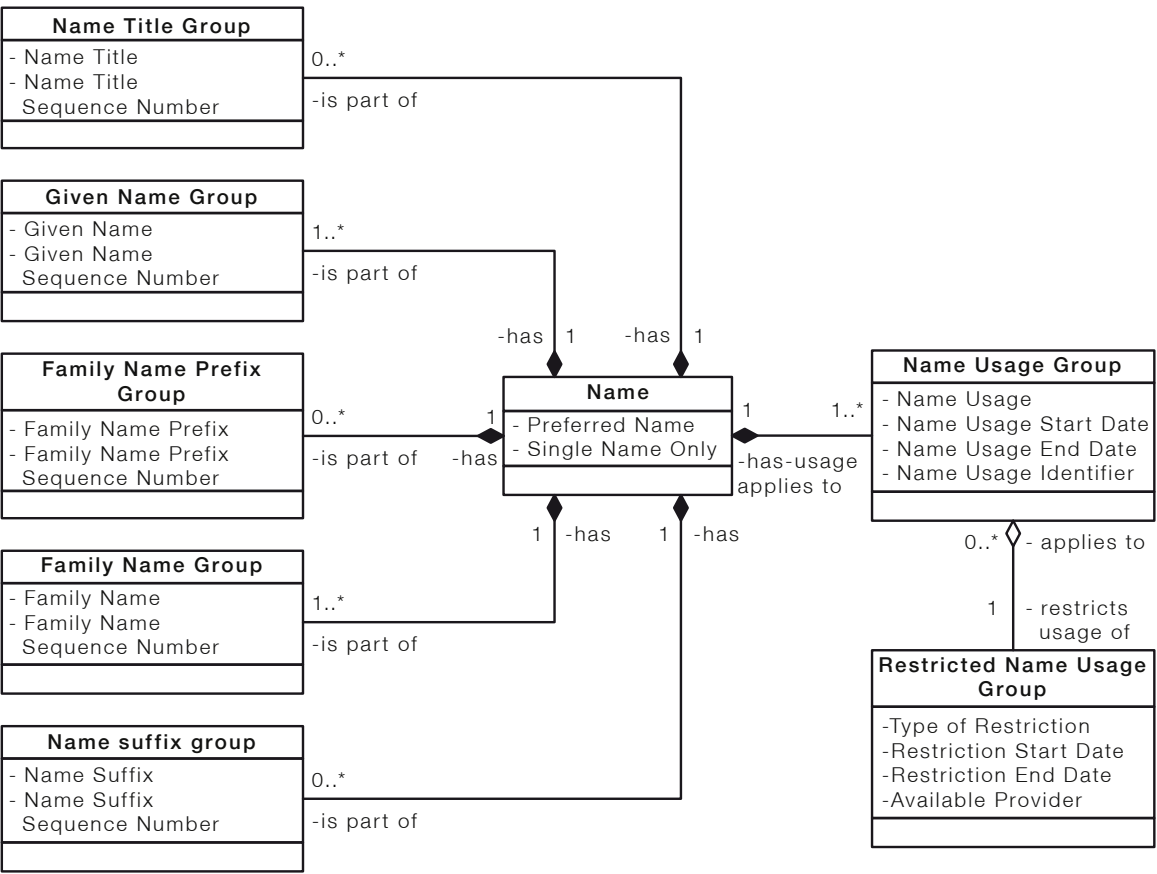


FIGURE 4 NAME COMPONENTS

Table 3 provides examples of the name data elements for a person who has a name entry of Anne Marie Brown Jones. The column headed ‘opt’ indicates whether this element is required (i.e. whether it shall always be present) or whether it is optional. If a data element is a group (e.g. Name Title Group) and is optional, the member of a group may be indicated as ‘R—required’. This means that if the group is recorded this element is required, but if the group is not included in the data or system it is not required.

Repeated data element indicates that any name may have more than one of these data elements or element groups. For example, ‘Family Name Group’ is required, but it is possible to have more than one of them (e.g. if the person has two family names such as Brown and Jones).

TABLE 3
HEALTHCARE NAME DATA ELEMENTS

Clause/ Section	Data element name	Opt.	Repeat data element	Example	Comment
Section 4	Individual Name	R	Y	Anne Marie Brown Jones	Any individual shall have at least one name.
4.4.3	Family Name Group	R	Y		Any person shall have at least one family name—these names occur in a group (which supports multi part names). In this example Anne Marie Brown Jones can be represented using two family names. It should be noted that sequence numbers are not expected to be manually recorded, but are used to ensure appropriate sequencing in systems and presentation.
4.4.3	Family Name	R	Y	Brown	
4.4.3.5	Family Name Sequence Number	R	Y	1	
4.4.3	Family Name			Jones	
4.4.3.5	Family Name Sequence Number			2	
4.1, 4.4.3.1, 4.6	Preferred Name	R	N	Mary	Anne Marie prefers to be called Mary, therefore this name is not the preferred name.
4.6.7	Single Name Only	R	N	Not a single name	When a name has only one component, the name is stored in the Family Name and the Given Name is left blank.
4.4.1	Name Title Group	O	Y		Titles are optional, but if there is one it shall have a sequence number.
4.4.2	Name Title	R	N	Dr	
4.4.2.1	Name Title Sequence Number	R	N	1	
4.5	Given Name Group	O	Y		Mary has two given names, so this element would occur twice. She would have another complete name entry for her preferred name (Mary Brown Jones).
4.5.2.1	Given Name	R	N	Anne	
4.5.2.2	Given Name Sequence Number	R	N	1	
4.5.2.1	Given Name			Marie	
4.5.2.2	Given Name Sequence Number			2	
4.5.3	Name Suffix Group	O	Y		
4.5.3.2	Name Suffix	R	N		
4.5.3.3	Name Suffix Sequence Number	R	N		
8.4	Name Usage Group	O	Y		This name may have many uses, so this data group allows Mary to identify that for formal reporting Anne Marie Brown Jones should be used, but for every day community she prefers another name to be used or prefers that the name that people know her by is another name.
4.6.2	Name Usage	R	N	1 reporting	
4.6.3	Name Usage Start Date	R	N		
4.6.4	Name Usage End Date	O	N		
4.6.5	Usage Identifier	O	N	123456 insurance company unique ID for this person	

(continued)

Clause/ Section	Data element name	Opt.	Repeat data element	Example	Comment
4.7	Restricted Name Usage	O	Y		
4.7.2	Type of Restriction	R	N		
4.7.3.1	Restriction Start Date	R	N		
4.7.3.2	Restriction End Date	O	N		
4.7.3.3	Available Provider	O	Y		

LEGEND:

O = Indicates that the data element is optional.

R = Indicates that the data element is required (the group might be required, or where the group is optional the individual data elements within the group may be marked as required—in this case, where the group exists the required elements shall be present).

There could be more than one name recorded for an individual. At least one name shall be captured and the preferred name should always be sought.

In healthcare the name is used not only as an identifier but also as a major means of communication and trust, and name is also a matter of privacy. For this reason it shall be recognized that people use different names for different purposes. They may have a name that is their ‘formal’ name used on formal or legal documents, but their family and friends may refer to them by a very different name. In Australia this is particularly true when many people from around the world adopt an ‘Australian’ name.

Example 1: An older gentleman who migrated from Greece in the 1960s has anglicized his name to George Papa and now rarely uses his original birth name. When George has serious chest pain at work and goes to the hospital, his colleagues give the only name they know—George Papa. The hospital’s systems need to be able to identify that this is the same person as George Papadopoulos. George’s Medicare card (which he did not have on him at the time) has his full name, George Papadopoulos, and although his hospital documents, enquiry information, bed card, etc., all say George Papa, the system needs to be able to identify that George Papadopoulos is the name to be used when reporting to his insurance company.

Example 2: A student from China named Xie Li Bei uses the name Leanne Xie. When Xie Li Bei has surgery after an injury and is recovering, it is important that the nurses know both her ‘Australian’ name and her Chinese name in order to assess her recovery from anaesthesia. They may call her ‘Leanne’, or, if she doesn’t respond, ‘Li Bei’. It is for these reasons that any identity system in healthcare is required to be able to identify all the names used for a person and the circumstances in which they should be applied (usage).

Each component of name content includes an indicator of sequence. This supports identification of the correct representation of each name component (e.g. first given name), but also supports ease of searching through generic searching of given names (irrespective of the position of that name in the sequence). This is particularly important as many people are known by names other than their first given name, or may drop parts of their family name over time.

4.2 NAME SEQUENCE NUMBER

Definition	An indicator of the order of use for an individual name component.																				
Source documents	Also see SA HB 234 for technical implementation guidance.																				
ISO 11179 data type	N Numeric																				
Value domain	<table> <tr> <th>Code</th><th>Descriptor</th></tr> <tr> <td>1</td><td>First name component of this type (e.g. first family name)</td></tr> <tr> <td>2</td><td>Second name component of this type (e.g. second given name)</td></tr> <tr> <td>3</td><td>Third name component of this type</td></tr> <tr> <td>4</td><td>Fourth name component of this type</td></tr> <tr> <td>5</td><td>Fifth name component of this type</td></tr> <tr> <td>6</td><td>Sixth name component of this type</td></tr> <tr> <td>7</td><td>Seventh name component of this type</td></tr> <tr> <td>8</td><td>Eighth name component of this type</td></tr> <tr> <td>9</td><td>Ninth and subsequent name component of this type</td></tr> </table>	Code	Descriptor	1	First name component of this type (e.g. first family name)	2	Second name component of this type (e.g. second given name)	3	Third name component of this type	4	Fourth name component of this type	5	Fifth name component of this type	6	Sixth name component of this type	7	Seventh name component of this type	8	Eighth name component of this type	9	Ninth and subsequent name component of this type
Code	Descriptor																				
1	First name component of this type (e.g. first family name)																				
2	Second name component of this type (e.g. second given name)																				
3	Third name component of this type																				
4	Fourth name component of this type																				
5	Fifth name component of this type																				
6	Sixth name component of this type																				
7	Seventh name component of this type																				
8	Eighth name component of this type																				
9	Ninth and subsequent name component of this type																				
Guide for use	To be used in conjunction with Name Title. Multiple Name Titles may be recorded. Each Name Title shall have a Name Title Sequence Number recorded. Example: ‘Reverend Professor’ would have a Name Title Sequence Number— 1 ‘Rev’; and 2 ‘Prof’. That is, ‘Reverend’ would have a Name Title Sequence Number of 1 and ‘Prof’ would have a Name Title Sequence Number of 2. Name is the combination of Name Title Group, Family Name Group, Given Name Group, and Name Suffix Group.																				

4.3 GENERAL GUIDE TO NAMES

It is acknowledged that some people use more than one name (e.g. formal name, birth name, married/maiden name and tribal name), depending on the circumstances. Each name should be recorded against the appropriate name type (see Clause 4.6, Name Usage Data Group) and linked to appropriate identifiers that use that name. For example, the name associated with the individual’s Medicare card or professional registration should be recorded as such.

A person is able to change his or her name by usage in all states and territories of Australia. Care should be taken when recording a change of name for a minor. Ideally, the name recorded for the minor should be known to both parents so that the minor’s records can be retrieved and continuity of care can be maintained, regardless of which parent accompanies the minor to the agency or establishment.

A person should be registered using that person’s preferred name, as it is more likely to be the name in common usage, and is more likely to be used on subsequent visits to the agency or establishment. It is also the name which relatives and friends are likely to use for making enquiries, should the individual be admitted to hospital. The person’s preferred name may or may not be the same name on that person’s Medicare card. The person’s Name Usage metadata item can be used to distinguish between the different types of names that may be used by the person. The name used for reporting purposes such as Medicare Card name or the name used in the Australian Individual Healthcare Identification system should also be registered in the healthcare system.

4.4 HEALTHCARE NAME CONTENT DATA ELEMENTS

4.4.1 Name Title Group

This group holds details of each title relevant to a specific name for the individual. The group indicates the actual title and the sequence in which that title should appear before the person's name.

For example, 'Dr Rev Brown' would have 'Dr' as the first sequenced name title and 'Rev' as the second sequenced name title.

4.4.2 Name Title

Definition	An honorific form of address commencing a name. It is used when addressing an individual by name, whether by mail or by phone or, depending upon cultural situation, in person.
Synonym	Honorific, name prefix.
Source documents	AS/NZS 4819 AS 4700.1—2006, <i>Implementation of Health Level Seven (HL7) Version 2.5, Part 1: Patient Administration</i> ISO/TS 27527 ISO/TS 22220 Also see SA HB 234 for technical implementation guidance.
METeOR identifier and title	453731 Person (name) name title, text [A(12)]
Guide for use	Name is the combination of Name Title Group, Family Name Group, Given Name Group and Name Suffix Group. Name title is not the same as job title. These titles are used wherever the individual's name is formally represented. Mixed case should be used (rather than upper case only). An example of Name Title is 'Mr' for Mister. Multiple Name Titles may be recorded. Each Name Title shall have a Name Title Sequence Number recorded. For example, 'Professor Sir John Markham' would have name title sequence numbers assigned as— 1 'Prof'; and 2 'Sir'. That is, 'Professor' would have a Name Title Sequence Number of 1 and 'Sir' would have a Name Title Sequence Number of 2.

4.4.2.1 Name Title Sequence Number

Definition	An indicator of the order of use for name titles.
Value domain	Refer to Clause 4.2, Name Sequence Number

4.4.3 Family Name and Prefix Group

4.4.3.1 General

This group includes each family name element of a specific family name set and includes the sequence in which the names should be used. The group includes a family name prefix, a family name and a family name sequence number. Individual name is the combination of the Name Title Group, the Family Name Group, the Given Name Group and the Name Suffix Group. Usage information such as preferred name, name usage and name usage restrictions applies to the whole group. Some cultures in Australia have family names that are more than one name, often constructed from both parents' family names (as is common in Portuguese culture). A family name may also have a prefix. These variations can cause difficulties in searching for individuals, and the structure presented in this Standard supports improved search functionality.

In other words, a family may be indicated by a group of data elements, a prefix, or one or more family names, and the ability will be available to indicate the sequence required for those family names in the case where there is more than one family name within one single name set.

4.4.3.2 Family Name Prefix

Definition	A starting component to a family name. Historically this is often an inherited honorific that has become part of the family name over time.
Source documents	AS 4700.1—2006, <i>Implementation of Health Level Seven (HL7) Version 2.5</i> , Part 1: <i>Patient Administration</i> Also see SA HB 234 for technical implementation guidance.
ISO 11179 data type	AN (Alphanumeric)
Display representation	Representation of the family name in upper case is often used to reduce confusion over which name is the family name.
Verification rules	Alphabetic characters, punctuation (e.g. '-') and spaces only.
Guide for use	Where an individual has a starting prefix to the family name, identification of that component as a prefix supports improved searching options in systems. Some examples of a family name prefix are— (a) von; (b) de; and (c) ozy.
Collection methods	Hyphenated family names are not a part of a Name Prefix and should be recorded in the Family Name. Name Prefix precedes family name in display of the full name. Names which include punctuation, such as O'Brien, should not have the 'O' separated out as a prefix, but should be treated as a single family name. This data element supports searching, especially in a country where family names are often anglicised, and prefixes may be removed.

4.4.3.3 Family Name Prefix Sequence Number

Definition	An indicator of the order of use for family name components.
Value domain:	Refer to Clause 4.2, Name Sequence Number

4.4.3.4 Family Name

Definition	The name an individual has in common with some other members of their family, as distinguished from that individual's first given name.
Synonym	Surname. Last name—although a common synonym, this term shall not be used in identifying information in healthcare.
Source documents	<i>Naming Systems for Ethnic Groups</i> AS 4700.1—2006, <i>Implementation of Health Level Seven (HL7) Version 2.5, Part 1: Patient Administration</i> Also see SA HB 234 for technical implementation guidance.
METeOR identifier and title	286953 Person (name)—family name, text X[X(39)]
ISO 11179 data type	AN (Alphanumeric)
Display representation	Common display mechanism: printing or displaying family name in upper case to clearly differentiate it from other parts of the name.
Guide for use	Mixed case should be used, although in display it is common to represent the family name group of information in upper case to differentiate it from given names. Hyphenated family names Sometimes people with hyphenated family names use only one of the two hyphenated names. It is useful to record each of the hyphenated names as a Name Usage = Other Name. If the person has a hyphenated family name, for example 'Wilson-Phillips', 'Wilson-Phillips' should be recorded in the Family Name field without a space and 'Wilson' and 'Phillips' should be recorded separately, and it should be indicated which is the preferred name. The name should be put into the system as two family names in the one name set, as follows: 1 Family name Wilson, family name sequence number 1. 2 Family name Phillips, family name sequence number 2. People with only one name Some people do not have a family name and a given name, but have only one name by which they are known. For such an individual the name should be recorded in the Family Name field and the Given Name field left blank. If the family name needs to be shortened If the length of the family name exceeds the length of the field, the family name should be truncated from the right (that is, dropping the final letters). Also, the last character of the name should be a tilde (~) to identify that the name has been truncated.
Collection methods	Punctuation If special characters form part of the family name they should be included; for example, hyphenated names should be entered with a hyphen without spaces. Apostrophe <i>for example O'Brien, D'Agostino.</i> No space should be left before or after the apostrophe; for example, for the name 'O'Brien', there should not be a space between the 'O' and the apostrophe, or between the apostrophe and 'Brien'. Full stop <i>for example St. John or St. George.</i> No space should be left before a full stop; for example, for the name 'St. John' there should not be a space between 'St' and the full stop. A space should be left between the full stop and the next name; for example, for the name 'St. John' there should be a space between the full stop and 'John'. In this example it would be incorrect to enter 'St .John' or 'St . John'.

(continued)

	Space <i>for example Van Der Humm, Le Brun (examples which should be entered using the provision for family name prefix).</i> If the person has recorded the family name as more than one word, for example [Sir Arthur] Conan Doyle, the name shall be collected as multiple family names. When it is displayed there should be a space between each family name in the same sequence as collected. Registering a pseudonym This process may be required in order to mask the identity of an individual, for example in the case of HIV testing, where the subject of care has the right of anonymity in many jurisdictions. In this case a pseudonym (fictitious or partial name) will be entered in lieu of the person's full or actual name. It is recommended that the subject be asked to record both the pseudonym (other name) as well as a legally known name (e.g. identity card name). Registering a pseudonym requires the local system to be able to identify which name is to be used or displayed as the preferred name for the purpose of the test. This might require the temporary change of the pseudonym name to preferred name, which is then changed back to the normal preferred name after the pseudonym use is over. This issue also arises when those working in healthcare are being treated. It is a common requirement in relation to staff of an organization or people in a comparatively small community. Registered unnamed newborn babies When registering a newborn, the mother's family name should be used as the baby's family name unless instructed otherwise by the mother. Unnamed babies should be recorded with a name usage value of Newborn name. This is a name that is not expected to persist, but unlike most temporary names no follow-up is required during the birth episode of care to find the correct longer term name. Registering an unidentified person The default for unknown family name should be 'unknown' in all instances, and the name recorded as an Other name (note: the restricted use flag needs to be used to indicate that this is not a reliable name). A 'fictitious' family name such as 'Doe' shall not be created, as this is an actual family name. When the subject's name becomes known, it shall be recorded as the 'preferred' name and the other name of 'unknown' shall not be overwritten. Registering individuals from disaster sites People from disaster sites being treated should be recorded with a name usage of 'other name'. Local business rules should be developed for consistent recording of disaster site patient details. Care should be taken not to use identical dummy data (family name, given name, date of birth, sex) for two or more subjects from a disaster site. For example, use of the surname 'Unknown1', 'Unknown2' in the family name can clearly differentiate between individuals. Some organizations use an injury description in the given name field to assist in identification. The use of a standard start to the name supports the use of search strategies to assist in finding individuals, especially when a large number of people need to be managed in a disaster. These names have restricted use as they are relevant only for the current episode of care and purpose and should be updated with the individual's real name as soon as possible.
--	--

4.4.3.5 Family Name Sequence Number

Definition	An indicator of the order of use for family name components.
Value domain	Refer to Clause 4.2, Name Sequence Number

4.5 GIVEN NAME GROUP

4.5.1 General

The Given Name Group is associated with a specific name and set of titles, suffixes and usage rules. There could be many given names, each with a sequence number.

4.5.2 Given Name and Given Name Sequence Number

4.5.2.1 Given Name

Definition	The identifying name within the family group or the name by which the person is uniquely socially identified.
Synonym	Forename, first name (the first sequenced given name), initial (as the first character of the first sequenced given name), Christian name, christened name, middle name (usually the name sequenced as the second name), second name, other given name.
Source documents	<i>Naming Systems for Ethnic Groups</i> ISO/TS 22220 ISO/TS 27527 AS 4700.1—2006, <i>Implementation of Health Level Seven (HL7) Version 2.5, Part 1: Patient Administration</i> Also see SA HB 234 for technical implementation guidance.
METeOR identifier and title	287035 Person (name)
Guide for use	Whenever a person informs an authority of a change of given name (e.g. states preference to be known by middle name), the former name should be recorded according to the appropriate Name Usage (see Clause 4.6). The previous given name should not be deleted or overwritten. For example, 'Mary Georgina Smith' informs Medicare Australia that she prefers to be known as 'Georgina'. 'Georgina Smith' should be recorded as Preferred Name and 'Mary Georgina Smith' as Registered Name. Multiple given names (middle, second, third, etc. names) All of the person's given names should be recorded, with each given name being recorded against the relevant Given Name Sequence Number. For example, 'Oscar Peter' would be recorded with 'Oscar' as the First Given Name (code 1) and 'Peter' as the Second Given Name (code 2). Registering an unidentified person If the person's name and identity are unknown at the point of care or request for care, the name used to identify that person in order to support care and diagnostic services shall not include a given name; that is, the given name field shall be left blank. When the person's name becomes known, the actual name should be added as a complete full name, in which case it would be usual to have a given name (although a given name is not required). The previous name should be retained without a given name, as a name which was temporary, though it is not deleted. Registering an unnamed newborn baby An unnamed (newborn) baby shall be registered using the mother's given name in conjunction with the prefix 'Baby of'. For example, if the baby's mother's given name is Fiona, then 'Baby of Fiona' shall be recorded in the (preferred) given name field for the baby. This name is recorded under the newborn name usage code. If a name is subsequently given, the new name shall be recorded as the preferred name and the newborn name retained. This is a name that is not expected to persist, but unlike most temporary names no follow up is required during the birth episode of care to find the correct longer term name.

(continued)