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Interim
Australian Standard®

Implementation of Health Level Seven (HL7) Version 2.5

Part 6: Referral, discharge and health record messaging

STANDARDS
Australia

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

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PREFACE

This Interim Standard was prepared by the IT-014-06-06, Collaborative Care Communications Working Group under direction from Standards Australia Committee IT-014, Health Informatics, in response to requests from the health informatics community.

It covers implementation of the Health Level Seven (HL7) Version 2.5 protocol, for communication of clinical patient-centred information between health service providers in Australia. It is applicable to clinical communications covering Discharge, Shared Care, Event Summaries, and notification of Shared Electronic Health Record Systems. The original focus was on Discharge Referral, but stakeholder requirements have led to its use in the more general area of patient care messaging.

This Standard supersedes AS 4700.6—2006, Implementation of Health Level Seven (HL7) Version 2.4, Part 6: Referral and discharge summary, which will remain current.

Notwithstanding the publication of this document, AS 4700.6—2006, *Implementation of Health Level Seven (HL7) Version 2.4,* Part 6: *Referral, discharge and health record messaging* remains current in respect of HL7 Version 2.4 implementations, and AS 4700.6—2004, *Implementation of Health Level Seven (HL7) Version 2.3.1,* Part 6: *Referral and discharge* summary remains current in respect of HL7 Version 2.3 and V2.3.1 implementations.

The mission of Working Group IT-014-06-06 is to—

(a) advise on the appropriateness of international Standards;

(b) recommend specific Standards and/or implementation guidelines for messages covering patient discharge and referral together with more general clinical services not covered by the other AS 4700 Standards; and

(c) consider the need for related Standards.

The HL7 Version 2.5 protocol covers a wide range of data interchange functions. This Interim Standard focuses on the HL7 discharge and referral, shared care and event summary messages. A Discharge Referral message is analogous to a paper-based discharge referral document and has more comprehensive requirements than the less-specific discharge summary.

All efforts have been made to minimize divergence from the underlying HL7 Version 2.x protocols (as published by HL7 Inc), in order to ensure maximum compatibility with future versions of HL7 Version2.x. Nevertheless, some significant enhancements have been put proposed in this Interim Standard, where needed to represent patient care related concepts adequately.

Attention is drawn to the fact that this document is an Interim Standard and may be subject to alterations flowing from further development. It has a currency of two years from its date of publication after which it will be either withdrawn, revised in the light of comments received, superseded by an Australian Standard, or re-issued as an Interim Standard for a further two year period. Persons and organizations concerned with the use of this Interim Standard are invited to submit comments on it to Standards Australia during its period of currency.

The term 'informative' is applied in this Interim Standard to content that is provided for information and guidance only and is not to be construed as definitive.

Standards Australia wishes to thank the Department of Health and Ageing for their financial support in helping us to produce this Interim Standard.

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FOREWORD

HL7 Version 2.5 is a health care application protocol accredited as a Standard by the American National Standards Institute (ANSI). 'Level Seven' refers to the highest level of the International Organization for Standardization (ISO) communications model for Open Systems Interconnection (OSI)—the application level. Issues within the application level include definition of the data to be exchanged, the timing of the exchange and the communication of certain errors to the application. This level supports such functions as security checks, identification of the participants, availability checks, negotiating exchange mechanisms and, importantly, structuring the data exchanges themselves.

HL7 focuses on the interface requirements of the entire health care organization. It allows development along the fastest possible track to the unique requirements of already installed hospital and departmental systems, some of which use mature technologies.

Australia already has an existing base of health care institutions that use the HL7 protocol to exchange key sets of data between different computer application systems. While HL7 is concerned with addressing immediate needs, there is a very strong focus on convergence with other Standards development activities in the USA and international HL7 initiatives in countries including Canada, China, Finland, Germany, India, Japan, Korea, the Netherlands, and the United Kingdom.

The HL7 protocol is a collection of standard formats that specify the implementation of interfaces between computer applications. It is not rigid. Flexibility is built into the protocol to allow compatibility for specialized data sets that have facility-specific needs. One of HL7's strengths is its inbuilt flexibility. However, it is also one of its weaknesses. It is open to misinterpretation in its structure and format. HL7 is based on the health environment in the USA. Implementation of the HL7 Version 2.5 Standard in the Australian health environment requires a common and consistent approach.

The intended audience for this Interim Standard includes health authorities, health service providers, general providers, health institutions, health information technology vendors, health information technology consultants and the health informatics community.

This is not a stand-alone document for review in isolation. A basic understanding of HL7 is essential, as this Interim Standard is based on and frequently refers to the HL7 Version 2.5 Standard.

In order to communicate clinical information, which is heavily context-dependent, it has been necessary to use local extensions to the Version 2.5 Standard. These extensions will be proposed for inclusion in a later version of HL7 Version 2.x. A referral, discharge or health record message may, under different circumstances, be required to include almost any data from a health record. This widens the scope of such a message and requires more complex contextual and relationship information applying to the included segments. A simpler message context is inferable from the trigger event but this is insufficient for the more general information in Referral, Discharge, Health Records, Event Summaries and Shared Care. This message has needed to include and combine segments designed for use in simpler more specific messages where their context is implicit from the trigger event. This applies particularly to History, Observations, Medications, Procedures, Problems, Goals and Pathways.

HL7 has not been widely used for structured clinical communications. When available, HL7 Version 3 Messaging and Clinical Document Architecture (CDA) are expected to be increasingly used for new applications. This Version 2 message is currently being used to inform the requirements and design of these future standards.

Frequent reference is made to AS 4700.1—2005 and AS 4700.1—2006, which covers the implementation of HL7 Versions 2.4 and 2.5 for patient administration within Australia. AS 4700.1—2005 and AS 4700.1—2006 provide an important foundation for the building of most clinical health care messages. Only those segments that have been identified as relevant have been detailed in the Australian implementation standards. Refer to the HL7 Version 2.5 protocol for all other message segments.

Where a segment is extended by the addition of new fields, these are added at the segment end and are to be regarded as 'Local Usage'. It is intended that they be proposed for inclusion in a later release of the HL7 Standard.

Specified terminology and coding is required for meaningful information exchange, and this therefore forms part of this Interim Standard.

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1 SCOPE

1.1 General

This Interim Standard covers implementation of electronic referral messages using the HL7 Version 2.5 protocol with local extensions, which will be proposed for inclusion in a later version of HL7 V2.X. It covers communication between health service providers both within and outside hospitals including communication for shared care and on discharge, other event summaries and notifications to shared electronic health record and clinical decision support systems.

The Interim Standard includes the data segments and data elements that are mandatory (required), optional or conditional (required, based on a condition), and relevant usage notes in the Australian health environment. The Interim Standard provides consistent use of data definitions as well as commentary and references to the International Organization for Standardization (ISO), the National Health Data Dictionary (NHDD), the National Association of Testing Authorities Australia (NATA), The General Practice Computing Group (GPCG) and its General Practice Data Model and Core Dataset (co-sponsored with the Australian Department of Health and Ageing).

This Interim Standard deals with representation of clinical information for purposes of sharing and transferring patient care. There may be additional administrative, financial, and eligibility aspects of referral, which are outside the scope of this Interim Standard, and have been excluded.

The message structure described in this Interim Standard is intended to communicate information from one clinical provider or organization to another (potentially via a shared electronic health record) and should be used wherever there is a complete or partial transfer of care, as occurs on discharge from a hospital or other care provider. Where used for transfer of care, the message will typically contain referral details as well as a discharge or other event summary. Relevant definitions are included in Clause 4 of this Interim Standard.

Clinical management by cooperating providers, mandates health service messaging built on agreed semantic exchange. The above groups are actively participating in developments in this evolving area. While the message protocols described in this Interim Standard employ a required level of coding as in the HL7 tables, they do not specify any particular controlled vocabulary for the broader area of clinical concept representation. A logical next step in terminology agreement should address the headings used in referral, and a code set such as SNOMED CT or LOINC should be considered for this.

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