



# **Implementation of Health Level Seven (HL7) Version 2.4**

## **Part 1.2.4: Patient administration**



This Australian Standard® was prepared by Committee IT-014, Health Informatics. It was approved on behalf of the Council of Standards Australia on 26 March 2014. This Standard was published on 21 May 2014.

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- ACT Health
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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.

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Australian Standard<sup>®</sup>

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## PREFACE

This Australian Standard was prepared by the Standards Australia Technical Committee IT-014, Health Informatics, in response to requests from the health informatics community.

The Standards Australia Technical Committee IT-014 recognizes the work of the Standards Australia Working Group IT-014-06-03, Patient Administration Messaging, in the preparation of this Standard.

This Standard covers implementation of chapter 3 of the Health Level Seven (HL7) Version 2.4 protocol and supersedes AS 4700.1—2005, *Implementation of Health Level Seven (HL7) Version 2.4*, Part 1: *Patient administration*. It is based on AS 4700.1—2001 (HL7 Version 2.3.1) and AS 4700.1—1998 (HL7 Version 2.3), which will remain current Standards. This Standard is based on the HL7 International Standard Version 2.4.

The objective of this Standard is to enable the greatest degree of standardization possible in the exchange of patient administration data among various healthcare computer applications in Australia using HL7 Version 2.4.

The changes from AS 4700.1—2005 to this document include the following:

- (a) The addition of Healthcare Identifiers.
- (b) The updating of the National Health Data Dictionary identifiers to the Australian Institute of Health and Welfare Metadata Online Registry identifiers.
- (c) Use of the term 'Section' when referring to HL7 International documents rather than 'Clause'.

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.

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

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## CONTENTS

	<i>Page</i>
FOREWORD.....	4
1 SCOPE.....	5
2 APPLICATION.....	5
3 NORMATIVE REFERENCES .....	5
4 TERMS AND ACRONYMS.....	6
5 GENERAL GUIDANCE.....	6
6 DEFINITIONS.....	11
7 TRIGGER EVENTS .....	11
8 MESSAGE SEGMENTS.....	30
9 BATCHING OF TRANSACTIONS.....	65
APPENDICES	
A ISSUES IN HL7 V2.4 STANDARD, FIXED IN HL7 V2.5 STANDARD.....	69
B ISSUES IN HL7 V2.4 GLOBAL, AND NOT FIXED IN HL7 V2.5 GLOBAL .....	72
C DATA TYPES IN HL7 V2.4 .....	73
BIBLIOGRAPHY.....	83

## FOREWORD

Work on this Standard was initiated by Standards Australia Working Group IT-014-06-03, Patient Administration Messaging, to fulfil its mission of developing Australian Standards for patient electronic data communication between healthcare information systems based on the Health Level Seven (HL7) protocol.

HL7 is a healthcare application protocol accredited as a Standard by the American National Standards Institute. 'Level Seven' refers to the highest layer of the International Organization for Standardization communications model for Open Systems Interconnection, the application layer. Issues within the application level include definition of the data to be exchanged, the timing of the exchange and communication of certain errors to the application. This layer 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 healthcare organization. It allows development along the fastest possible track to the unique requirements of already installed healthcare systems, some of which use mature technologies.

Australia already has an existing base of healthcare 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 such as Canada, Finland, Germany, India, Japan, the Netherlands, South Africa 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. HL7's inbuilt flexibility is one of its strengths. 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 2.4 protocol in the Australian health environment requires a common and consistent approach.

The HL7 protocol covers a wide range of data interchange functions. However, this Australian implementation Standard focuses on the patient administration functions, as these form the common basis for all HL7 messages. Generally, information entered into a patient administration system is passed to the nursing, ancillary and financial systems, either in the form of an unsolicited update or in response to a record-oriented query.

Other functions of HL7 being addressed in Australian Standards include pathology orders and results, pathology results for registries, electronic messages for exchange of information on drug prescription, and referral and health service messaging. These Standards are being developed by combining HL7 technical expertise with specialist business knowledge.

# STANDARDS AUSTRALIA

## Australian Standard

### Implementation of Health Level Seven (HL7) Version 2.4

#### Part 1.2.4: Patient administration

## 1 SCOPE

This Standard defines a uniform implementation of chapter 3 of the Health Level Seven (HL7) Version 2.4 (V2.4) protocol. It is primarily designed for use within and between Australian healthcare settings.

It covers patient administration functions, as these form the basis for most clinical healthcare messages. It also provides interpretation of and guidance on which HL7 trigger events, segments and data elements are mandatory (required), or optional or conditional (required, based on a condition), and gives relevant usage notes for the Australian health environment.

This Standard provides for consistent use of data definitions as well as commentary and references to the National Health Data Dictionary (available via the Metadata Online Registry at [www.meteor.aihw.gov.au](http://www.meteor.aihw.gov.au)) and the International Organization for Standardization (ISO). This Standard is referenced by other Australian Standards on how to implement HL7 and is required by implementers of those Standards.

### NOTES:

- 1 Appendix A lists issues in the global HL7 V2.4 Standard that have been addressed in the global HL7 V2.5 Standard.
- 2 Appendix B lists issues in the global HL7 V2.4 Standard that have not been addressed in the global HL7 V2.5 Standard.
- 3 Appendix C lists the data types in HL7 V2.4.

## 2 APPLICATION

This Standard shall be read in conjunction with the HL7 V2.4 Standard (see Clause 3).

This Standard is a guide for use by Australian health authorities, health service providers, health institutions, health information technology vendors, health information technology consultants and the health informatics community who use the HL7 protocol to exchange key sets of data between different computer application systems.

NOTE: This is not a stand-alone document for application in isolation. A good understanding and, preferably, working knowledge of HL7 is essential.

## 3 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

AS	
2632	Codes for the representation of names of countries and their subdivisions
2632.1	Part 1: Country codes
5017	Health Care Client Identification
HL7 V2.4	Health Level Seven Version 2.4, Ann Arbor: Health Level Seven, 2000
METeOR	Australian Institute of Health and Welfare (AIHW) 2010. Metadata Online Registry (METeOR). Canberra: AIHW. Viewed 11 October 2011, < <a href="http://meteor.aihw.gov.au/content/index.phtml/itemId/181162">http://meteor.aihw.gov.au/content/index.phtml/itemId/181162</a> >.

NOTE: Documents for informative purposes are listed in the Bibliography.