

Australian Standard™

**Implementation of Health Level Seven
(HL7) Version 2.3.1**

Part 1: 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 15 December 2000 and published on 12 January 2001.

The following interests are represented on Committee IT-014:

Australian and New Zealand College of Anaesthetists
Australian Association of Pathology Practices
Australian Health Insurance Association
Australian Healthcare Association
Australian Institute of Health and Welfare
Australian Medical Association
Australian Private Hospitals Association
Central Queensland University
Commonwealth Department of Health and Aged Care
Consumers Federation of Australia
Consumers Health Forum of Australia
Department of Human Services, South Australia
Department of Human Services, Vic.
Health Department of Western Australia
Health Informatics Society of Australia
Health Information Management Association of Australia
Health Insurance Commission
Institution of Engineers Australia
Medical Software Industry Association
National Health Information Management Group
New Zealand Health Information Foundation
New South Wales Health Department
Queensland Health
Royal Australian and New Zealand College of Radiologists
Royal Australian and New Zealand College of Obstetricians and Gynaecologists
Royal Australian College of General Practitioners
Royal Australian College of Medical Administrators
Royal College of Nursing, Australia
Society of Hospital Pharmacists of Australia

Keeping Standards up-to-date

Standards are living documents which 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 Standards may also be withdrawn.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 which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 00046.

Australian Standard™

**Implementation of Health Level Seven
(HL7) Version 2.3.1**

Part 1: Patient administration

Originated as AS 4700.1—1997.
Previous edition AS 4700.1—1998.
Third edition 2001.

COPYRIGHT

© Standards Australia International

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.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 3738 2

PREFACE

This Standard was prepared by the Standards Australia/Standards New Zealand Committee IT-014, Health Informatics, in response to requests from the health informatics community. This Standard supersedes AS 4700.1—1998, *Implementation of Health Level Seven (HL7) Version 2.3*, Part 1: *Patient administration*. It covers implementation of Chapter 3 of the Health Level Seven (HL7) Version 2.3.1 protocol. This Standard is primarily designed for use within and between Australian healthcare settings. The Standard covers the function of patient administration, as this forms the basis for most clinical healthcare messages.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee that it be produced as an Australian Standard.

HL7 is a healthcare 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 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 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 and New Zealand already have 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. 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 2.3.1 protocol in the Australian health environment requires a common and consistent approach.

This is not a stand-alone document for application in isolation. A good understanding and, preferably, working knowledge of HL7 is essential, as this Standard is based on and frequently refers to the HL7 Version 2.3.1 protocol. Further information on the HL7 protocol is available from Standards Australia.

CONTENTS

	<i>Page</i>
FOREWORD.....	4
1 SCOPE.....	5
2 APPLICATION.....	5
3 REFERENCED DOCUMENTS.....	5
4 DEFINITIONS.....	6
5 TRIGGER EVENTS.....	6
6 MESSAGE SEGMENTS.....	22

FOREWORD

This Standard was prepared by the IT-014-06-03, HL7 Health Message Working Group under direction from Committee IT-014, Health Informatics.

The mission of this working group is to develop Australian Standards for patient electronic data communication between healthcare information systems based on the current release of the Health Level Seven (HL7) protocol.

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 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.

Beyond developing Australian Standards for patient electronic data communication between healthcare information systems, the working group has the following objectives:

- (a) To provide a single channel for Australian review and discussion of input for the development of the HL7 protocol.
- (b) To provide the infrastructure to—
 - (i) disseminate information on the HL7 protocol;
 - (ii) provide a forum for discussion and feedback;
 - (iii) expedite the information flows from Australia to the HL7 organization in the USA; and
 - (iv) liaise with Standards Australia Committee IT-011 on electronic commerce and UN/CEFACT message development.
- (c) To seek representation from all interested parties in any review and discussion.
- (d) To provide a focus for Australian input to the development of HL7 Version 3.0.

All efforts have been made to minimize divergence from the HL7 USA protocol to ensure maximum compatibility with future versions.

Standards Australia

Australian Standard
Implementation of Health Level Seven (HL7) Version 2.3.1

Part 1: Patient administration

1 SCOPE

This Standard defines a uniform implementation of Chapter 3 of the Health Level Seven (HL7) Version 2.3.1 protocol. This Standard 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. The Standard provides interpretation 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. The Standard provides for consistent use of data definitions as well as commentary and references to the National Health Data Dictionary 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.

2 APPLICATION

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. However, because of HL7's inbuilt flexibility, it is open to misinterpretation in structure and format. Implementation of the HL7 Standard in the Australian health environment requires a common and consistent approach.

This is not a stand-alone document for application in isolation. A good understanding and, preferably, working knowledge of HL7 is essential, as this Standard is based on and frequently refers to the HL7 Version 2.3.1 Standard.

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.

For the purposes of this Standard, only human patients are considered.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
4590	Interchange of client information
ISO	
639	Code for the representation of names of languages
3166	Codes for the representation of names of countries and their subdivisions
3166.1	Part 1: Country codes
ISO/IEC	
2022	Information technology—Character code structure and extension techniques
HL7 V2.3.1	Health Level Seven Version 2.3.1, Ann Arbor: Health Level Seven, 1999