

Interim Australian Standard[®]

**Implementation of Health Level Seven
(HL7) Version 2.5**

Part 5: Immunization messages

STANDARDS
Australia



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- Australian Department of Health and Ageing
- Australian Electrical and Electronic Manufacturers Association
- Australian Information Industry Association
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Additional Interests:

- ArgusConnect
 - Collaborative Centre for e-Health
 - Department of Veterans Affairs
 - Health Communication Network
-

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.

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**Implementation of Health Level Seven
(HL7) Version 2.5**

Part 5: Immunization messages

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PREFACE

This Interim Standard was prepared by the IT-014-06-04 Prescription Messaging 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 immunization messages between immunization service providers and registries in Australia. It is based on HL7 Version 2.5 and incorporates the differences between HL7 Version 2.4 and HL7 Version 2.5.

Notwithstanding the publication of this document, AS 4700.5—2005, *Implementation of Health Level Seven (HL7) Version 2.4, Part 5: Immunization messages* remains current in respect of HL7 Version 2.4 implementations, and AS 4700.5—2002 *Implementation of Health Level Seven (HL7) Version 2.3.1, Part 5: Immunization messages* remains current in respect of HL7 Version 2.3.1 implementations.

In this document, frequent reference is made to AS 4700.1—2006, *Implementation of Health Level Seven (HL7) Version 2.5, Part 1: Patient administration* which covers the implementation of HL7 Version 2.5 for patient administration within and between Australian health care settings. AS 4700.1—2006 provides an important foundation for the building of most clinical health care messages.

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 It has a currency of two years from its date of publication after which it will be either withdrawn, revised in the light of comments received, superseded by an Australian Standard, or reissued as an Interim Standard for a further two year period.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

The starting point for the HL7 Version 2.4 of AS 4700.5 was a document prepared by the Health Insurance Commission, on proposed immunization messages for the Australian Childhood Immunization Register. This Interim Standard is a version upgrade to permit contracts specifying HL7 Version 2.5 to reference an appropriate Australian Standard.

Benefits from standards development will be achieved through:

- (a) Improvements in data quality standards and consistency.
- (b) Improved timeliness of notification and surveillance.
- (c) Reduction in duplication through improved patient identification.
- (d) Reduction in health care information system costs.

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

The IT-014-06-04, Prescription Messages working group has recognized a need for an Australian body/authority to represent/make Australian submissions to the Centres for Disease Control and Prevention (CDC), Atlanta.

The intended users of this Interim Standard include health authorities, immunization service providers, immunization registries, health institutions, health information technology vendors, health information technology consultants and the health informatics community.

HL7 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 definitions 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 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 with international HL7 initiatives in countries including 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. Implementation of the HL7 Version 2.5 Standard in the Australian health environment requires a common and consistent approach.

STANDARDS AUSTRALIA

Interim Australian Standard Implementation of Health Level Seven (HL7) Version 2.5

Part 5: Immunization messages

1 SCOPE

This Interim Standard covers implementation of communications between immunization service providers and immunization registries, using the HL7 Version 2.5 protocol. The Standard covers the events that trigger communication, the batching of transactions, together with the structure and content of electronic messages. This 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 Standard provides consistent use of data definitions as well as commentary and references to the International Organization for Standardization (ISO) and *National Health Data Dictionary (NHDD)*.

2 APPLICATION

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. 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 Interim Standard applies to messages between immunization service providers and immunization registries throughout Australia. It is for use by Australian health authorities, health service providers, health institutions, health information technology vendors, health information technology consultants and the health informatics community.

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

This is not a stand-alone document, i.e. for review in isolation. A good understanding and working knowledge of HL7 is essential, as this Interim Standard is based on and frequently refers to HL7 V2.5.

Frequent reference is made to AS 4700.1—2006, which covers the implementation of patient administration messages and provides an important foundation for the building of most clinical health care messages.

3 REFERENCED AND RELATED DOCUMENTS

3.1 Referenced documents

The following documents are referred to in this Standard:

AS	
2632	Codes for the representation of names of countries and their subdivisions
2632.1—1999	Part 1: Country codes
4590—2006	Interchange of client information
4700	Implementation of Health Level Seven (HL7) Version 2.5
4700.1—2006	Part 1: Patient administration