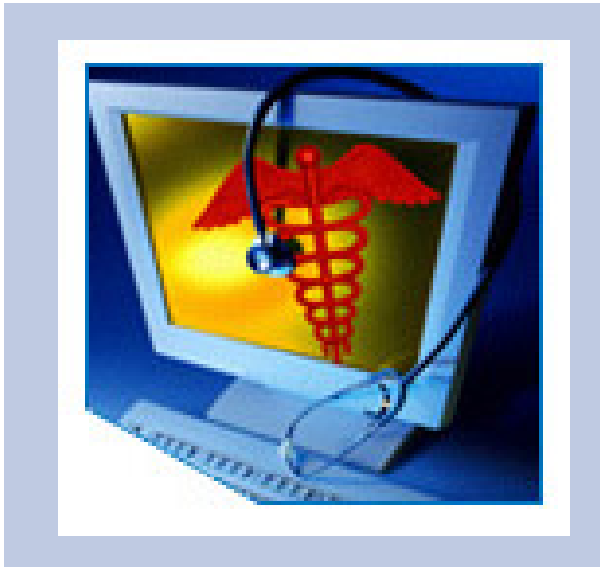


# HITSP Interoperability Specification: Acknowledgements Component

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HITSP/ISC-45



*Submitted to:*

**Healthcare Information Technology Standards Panel**

*Submitted by:*

**Biosurveillance Technical Committee Use Case  
Consumer Empowerment Technical Committee Use Case  
Electronic Health Records Technical Committee Use Case**



## DOCUMENT CHANGE HISTORY

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## 1.0 FOREWORD

30 Healthcare Information Technology Standards Panel (HITSP) is a multi-stakeholder coordinating body designed to provide the process within which affected parties can identify, select, and harmonize standards for communicating healthcare information throughout the healthcare spectrum. HITSP functions as a partnership of the public and private sectors and operates with a neutral and inclusive governance model administered by the American National Standards Institute. The goal of the Panel is to:

- 35
- Facilitate the development of harmonized interoperability specifications and information policies, including SDO work products (e.g. standards, technical reports). These policies, profiles and work products are essential for establishing privacy, security and interoperability among healthcare software applications.
  - 40 • Coordinate, as appropriate, with other national, regional and international groups addressing healthcare informatics to ensure that the resulting standards are globally relevant.
  - Be use-case driven, utilize information from stakeholders and base its decisions on industry needs.

45 The HITSP shall serve the public good by working to ensure that the combined work of various healthcare information standards organizations supports interoperability, accurate use, access, privacy and security of shared health information.

In order to advance the goal of expanding harmonized interoperability specifications and information policies, HITSP was tasked with developing interoperability specifications for three main use case

50 “breakthroughs areas” in which specific, near term value to the health care consumer could be realized. The harmonized use case areas are:

- |                             |  |
|-----------------------------|--|
| 1. Biosurveillance          | Transmit essential ambulatory care and emergency department visit, utilization, and lab result data from electronically enabled health care delivery and public health systems in standardized and anonymized format to authorized Public Health Agencies with less than one day lag time. |
| 2. Consumer Empowerment     | Allow consumers to establish and manage permissions access rights and informed consent for authorized and secure exchange, viewing, and querying of their linked patient registration summaries and medication histories between designated caregivers and other health professionals.     |
| 3. Electronic Health Record | Allow ordering clinicians to electronically access laboratory results, and allow non-ordering authorized clinicians to electronically access historical and other laboratory results for clinical care.  |

The interoperability specification provides a detailed mapping of existing standards and specifications

55 such as implementation guides, integration profiles to actions and actors that satisfy the requirements imposed by the relevant use cases. It identifies and constrains standards where necessary, and creates groupings of specific actions and actors to further describe the relevant contexts. Where gaps and



overlaps are identified, the interoperability specification provides recommendations and a roadmap for corrections to be made.

## 2.0 INTRODUCTION

The Acknowledgements Component is a general purpose message used to report receipt of messages sent using transaction, transaction package, and interoperability messages. Acknowledgements may be either for successful receipt or un-successful receipt.

Acknowledgements messages will be sent by recipients of transaction, transaction package, and interoperability messages where it is determined that notice of successful or unsuccessful receipt of such messages is appropriate and some other suitable response message is not considered sufficient or timely.

### 2.1 OVERVIEW

This Acknowledgements Component document extracts the Health Level Seven (HL7) version 2.5 General Acknowledgement data mapping for Original Mode acknowledgements. The detailed processing rules for Original Mode acknowledgements are contained in section 2.9.2 of the HL7 version 2.5 standard available from HL7:

3300 Washtenaw Avenue, Suite 227  
Ann Arbor, Michigan 48104-4261  
Phone: 734-677-7777 FAX: 734-677-6622  
[www.HL7.org](http://www.HL7.org) [HQ@HL7.org](mailto:HQ@HL7.org)

### 2.2 AUDIENCE

The interoperability specification is designed to be used by analysts who need to understand the interoperability requirements for the described use case, and by implementers working to develop interoperable applications. Understanding and using the relevant interoperability set of specifications is a key requirement for establishing interoperability compliance.

This document is primarily intended for information technology staff focused on programming inter-computer message transmissions and receipts, and/or building message translators. Knowledge of structures and contents of messages from a communications perspective is most essential. Understanding of the business use of data contained within the messages could be useful in some cases, but is generally not key for this Acknowledgements Component. Familiarity with Health Level Seven (HL7) version 2 is required. Familiarity with HL7 version 2.5 is preferred.

### 2.3 TERMS AND DEFINITIONS

The definitions used for the purposes of this document can be found in the glossary found in the appendix.

### 2.4 CONVENTIONS

This specification uses the following to convey the full descriptions and usage of standards:



100

### **UML sequence and activity diagrams**

In these diagrams, the actors and transactions are highlighted within the framework of the specific scenario or context. The actors involved in the specified use-scenario or context are mapped out, and the interactions between each action and actor for a particular context, and the flow of data are provided through the use of arrows. Diagrams are named according to the section in which they reside, and will use the following naming convention:

Figure <section number>-<consecutive number for the diagram, e.g. 1, 2, 3, etc.>. <Short name/description of diagram>. For example, a diagram residing in section 3.1.3 showing the Actor Interactions for the Send Lab Results transaction package is named:

Figure 3.1.3-1. Send Lab Results Transaction Package

### **Tables**

Tables are used to indicate standards categorizations, as well as dependencies and constraints between constructs. Tables are named according to the section in which they reside, and will use the following naming convention:

Table <section number>-<consecutive number for the table, e.g. 1, 2, 3, etc.>. <Short name/description of table>. For example, a table residing in section 2.7.1 showing the Dependencies between the transactions for the Send Lab Results transaction package is named:

Table 2.7.1-1. Send Lab Results Transaction Package dependencies

### **References**

When references are made to another section within an Interoperability Specification a section number is used by itself. When references are made to other constructs that are related to the Interoperability Specification, such as Transaction Packages, Components or Composite Standards, the HITSP document short name and section number are displayed as follows:

<HITSP Document short name or Composite Standard Short Name>-<Volume Number>: <section number>

where:

<HITSP document short name> is a short designator for the construct (e.g. HITSP/ISTP-013)

<Composite Standard Short Name> is a short designator for the composite standard (e.g. IHE-ITI TF)

<Volume Number> is the applicable volume within the given composite standard (e.g. 1)

<section number> is the applicable section number (e.g. 3.1)

For example: HITSP/ISTP-013: 3.1 refers to Section 3.1 in the Interoperability Specification for a Transaction Package, IHE-ITI TF-2: 4.33 refers to Section 4.33 in volume 2 of the IHE IT Infrastructure Technical Framework.

This document uses two additional conventions.



- (a) HL7 message, segment and field layouts as defined and illustrated in HL7 version 2.5. Segments and fields used are shown in normal text. Unused segments and fields are indicated by a lighter colored gray text. All unused segments that follow the last segment used in a message are not shown. Similarly, all unused fields that follow the last field used in a segment are not shown.

- 145 (b) Explanations of each field used organized according to the following table:

|                        |  |  |
|------------------------|--|--|
| Identifier             |  |  |
| Description            |  |  |
| Source – where created |  |  |
| Rationale – where used |  |  |
| Data Type              |  |  |
| Conformance            |  |  |
| Repetitions            |  |  |
| Code Domain            |  |  |

## 2.5 COMMENTS

150 To submit comments for this interoperability specification, please download the Comment Submission sheet from the HITSP site at [www.hitsp.org](http://www.hitsp.org) and provide all relevant information, and then email the completed document to [hitspcomments@ansi.org](mailto:hitspcomments@ansi.org). Comments are consolidated periodically and sent to the Technical Committees for review.

## 2.6 COPYRIGHT PERMISSIONS

### 155 COPYRIGHT NOTICE

© [\_\_\_\_\_] (Note: Name of copyright holder is currently under review by Government) This material may be copied without permission from \_\_\_\_ only if and to the extent that the text is not altered in any fashion and \_\_\_\_'s copyright is clearly noted.

160 HL7 materials used in this document have been extracted from relevant copyrighted materials with permission of Health Level Seven (HL7). Copies of this standard may be purchased from the Health Level 7 website at [www.hl7.org](http://www.hl7.org).

## 3.0 STANDARDS REFERENCES

165 The standard presented here is the only standard that was selected for use with this component.

### 3.1 LIST OF BASE STANDARDS

#### Information Interchange Standards



| Standard            | Description/Reason for selection/Reference |
|---------------------|--|
| HL7 v 2.5 Messaging | Acknowledgement                            |
|                     |  |

### 3.2 LIST OF COMPOSITE STANDARDS

170 Not Applicable

## 4.0 COMPONENT

175 The Acknowledgements component is a common response to received content (e.g., ADT, encounter, results) messages. An Acknowledgements message is always sent from the receiver of a content message back to the sender unless:

- (a) a particular content message requires a pre-defined specific response; e.g., an Immediate mode response to a query, or
- (b) Sending and receiving organizations have explicitly pre-negotiated the circumstances under which an Acknowledgements message is not to be sent.

180

### 4.1 CONTEXT OVERVIEW

The Acknowledgements component is intended for use wherever Health Level Seven (HL7) content messages are used.

#### 185 4.1.1 CONTEXTUAL CONSTRAINTS

190 The Acknowledgements component is used by any pairs of systems capable of exchanging HL7 messages. For the purposes of this document, it is presumed that only real-time HL7 messaging is occurring. Additionally, this Acknowledgements component specification is restricted to HL7 single messaging only; i.e., acknowledgement of multiple messages contained in batches (bracketed by BHS – BTS segments) or files (bracketed by FHS – FTS segments) is not described.

#### 4.1.2 TECHNICAL ACTORS

195 The Technical Actors in the Acknowledgements component are all pairs of systems who have agreed to exchange HL7 messages and who do not satisfy the exceptions listed in 3.0, above.

### 4.2 INFORMATION INTERCHANGE COMPONENTS: RULES FOR IMPLEMENTING

The following sections provide details about the Acknowledgements component

#### 4.2.1 PROCESS FLOWS

200

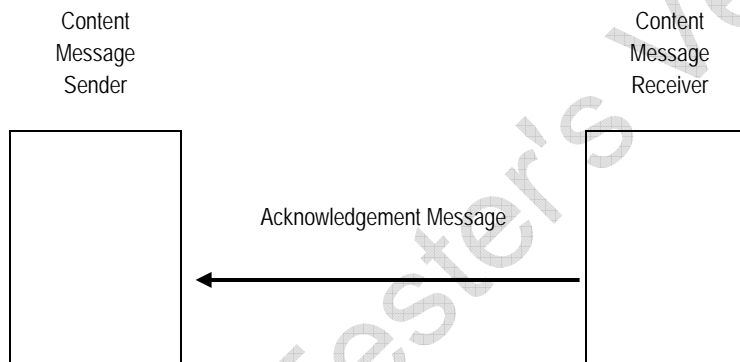
This document describes the acknowledgement message in Step 3 in the following chart.





| Step   | Process   |
|--------|---|
| Step 1 | Sending system constructs an HL7 content message from application data and sends it to the receiving system |
| Step 2 | Receiving system receives content message and processes it  |
| Step 3 | Receiving system of content message sends acknowledgement message   |
| Step 4 | Sending system of content message receives and processes acknowledgement message                            |

205



#### 4.2.2 PROCESS PRE-CONDITIONS

210

This section contains a number of tables taken from HL7 v2.5 ACK. Each table so copied will identify the HL7 table name.

Content Message Sender: none specifically related to this transaction.

215

Content Message Receiver: receipt of the content message to a degree that permits, at a minimum, parsing the content message to determine its relevant HL7 segments, fields, components, and subcomponents.

##### 4.2.2.1 PROCESS TRIGGERS

Content Message Sender: sending of a content message.

Content Message Receiver: receipt of a content message.

220

#### 4.2.3 PROCESS POST-CONDITIONS

Content Message Sender – now the Acknowledgement Message Receiver: receipt of the acknowledgement message.

225

Content Message Receiver – now the Acknowledgement Message Sender: none specifically related to this transaction.



#### 4.2.3.1 PROCESS OUTPUTS

Content Message Sender – now the Acknowledgment Message Receiver:

If a successful acknowledgement is received, no further actions are required.

If an error acknowledgement is received, corrective actions on the originally sent content message.

230 Content Message Receiver – now the Acknowledgment Message Sender:

If a successful acknowledgement is sent, process the content message.

If an error acknowledgement is sent, results of corrective actions, if any, on the originally sent content message.

#### 4.2.4 DATA STRUCTURE

235 Only one data flow occurs in this Acknowledgement Component.

### ACKNOWLEDGEMENT

The Acknowledgements Component uses one HL7 message, General Acknowledgment, ACK,

240 consisting of three segments: MSH, MSA and ERR. Only Original Mode acknowledgements are used.

| <u>ACK^varies^ACK_varies</u> | <u>General Acknowledgment</u> |
|------------------------------|-------------------------------|
| MSH                          | Message Header                |
| {{ SFT }}                    | Software segment              |
| MSA                          | Message Acknowledgment        |
| {{ ERR }}                    | Error                         |

HL7 Segment - MSH - Message Header

| SEQ | LEN | DT  | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME          |
|-----|-----|-----|-----|------|------|--------|-----------------------|
| 1   | 1   | ST  | R   |      |      | 00001  | Field Separator       |
| 2   | 4   | ST  | R   |      |      | 00002  | Encoding Characters   |
| 3   | 227 | HD  | O   |      |      | 00003  | Sending Application   |
| 4   | 227 | HD  | O   |      |      | 00004  | Sending Facility      |
| 5   | 227 | HD  | O   |      |      | 00005  | Receiving Application |
| 6   | 227 | HD  | O   |      |      | 00006  | Receiving Facility    |
| 7   | 26  | TS  | R   |      |      | 00007  | Date/Time Of Message  |
| 8   | 40  | ST  | O   |      |      | 00008  | Security              |
| 9   | 15  | MSG | R   |      |      | 00009  | Message Type          |
| 10  | 20  | ST  | R   |      |      | 00010  | Message Control ID    |
| 11  | 3   | PT  | R   |      |      | 00011  | Processing ID         |
| 12  | 60  | VID | R   |      |      | 00012  | Version ID            |
| 13  | 15  | NM  | O   |      |      | 00013  | Sequence Number       |

|            |       |
|------------|-------|
| Identifier | MSH-1 |
|------------|-------|



|                               |   |  |
|-------------------------------|---|--|
| <b>Description</b>            | Field Separator   |  |
| <b>Source – where created</b> | Sending Software Application  |  |
| <b>Rationale – where used</b> | Indicates the character that will separate fields in all segments contained in Acknowledgement Component messages |  |
| <b>Data Type</b>              | ST  | String                                   |
| <b>Conformance</b>            | R   | Value must always be supplied (no nulls) |
| <b>Repetitions</b>            | N   | Does not repeat                          |
| <b>Code Domain</b>            | HL7   | Only HL7 default value shall be used     |

245



|                        |  |  |
|------------------------|--|--|
| Identifier             | MSH-2  |  |
| Description            | Encoding Characters  |  |
| Source – where created | Sending Software Application   |  |
| Rationale – where used | Contains four characters that indicate, in order:<br>Character that separates components of fields<br>Character that indicates repetitions of data<br>Character that identifies a following escape character<br>Character that separates subcomponents of components |  |
| Data Type              | ST   | String                                   |
| Conformance            | R  | Value must always be supplied (no nulls) |
| Repetitions            | N  | Does not repeat                          |
| Code Domain            | HL7  | Only HL7 default values shall be used    |

|                        |   |  |
|------------------------|---|--|
| Identifier             | MSH-3   |  |
| Description            | Identification of Content Message Receiving / Acknowledgement Message Sending Application           |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                    |  |
| Rationale – where used | Contains information that identifies the software system that is sending the acknowledgment message |  |
| Data Type              | HD  | Hierarchic Designator                    |
| Conformance            | R   | Value must always be supplied (no nulls) |
| Repetitions            | N   | Does not repeat                          |
| Code Domain            | n/a   | Free text                                |



|                               |   |  |
|-------------------------------|---|--|
| <b>Identifier</b>             | MSH-4   |  |
| <b>Description</b>            | Identification of Content Message Receiving / Acknowledgement Message Sending Facility                        |  |
| <b>Source – where created</b> | Content Message Receiving / Acknowledgement Message Sending Software Application                              |  |
| <b>Rationale – where used</b> | Contains information that identifies the facility or organization that is sending the acknowledgement message |  |
| <b>Data Type</b>              | HD  | Hierarchic Designator                    |
| <b>Conformance</b>            | R   | Value must always be supplied (no nulls) |
| <b>Repetitions</b>            | N   | Does not repeat                          |
| <b>Code Domain</b>            | n/a   | Free text                                |

|                               |  |  |
|-------------------------------|--|--|
| <b>Identifier</b>             | MSH-5  |  |
| <b>Description</b>            | Identification of Content Message Sending / Acknowledgment Message Receiving Application   |  |
| <b>Source – where created</b> | Content Message Receiving / Acknowledgement Message Sending Software Application as obtained from content message being acknowledged |  |
| <b>Rationale – where used</b> | Contains information that identifies the software system that is receiving the acknowledgment message                                |  |
| <b>Data Type</b>              | HD   | Hierarchic Designator                    |
| <b>Conformance</b>            | R  | Value must always be supplied (no nulls) |
| <b>Repetitions</b>            | N  | Does not repeat                          |
| <b>Code Domain</b>            | n/a  | Free text                                |



|                               |   |  |
|-------------------------------|---|--|
| <b>Identifier</b>             | MSH-6   |  |
| <b>Description</b>            | Identification of Content Message Sending / Acknowledgment Message Receiving Facility   |  |
| <b>Source – where created</b> | Content Message Sending / Acknowledgment Message Receiving Software Application as obtained from content message being acknowledged |  |
| <b>Rationale – where used</b> | Contains information that identifies the facility or organization that is receiving the acknowledgement message                     |  |
| <b>Data Type</b>              | HD  | Hierarchic Designator                    |
| <b>Conformance</b>            | R   | Value must always be supplied (no nulls) |
| <b>Repetitions</b>            | N   | Does not repeat                          |
| <b>Code Domain</b>            | n/a   | Free text                                |

|                               |   |  |
|-------------------------------|---|--|
| <b>Identifier</b>             | MSH-7   |  |
| <b>Description</b>            | Date/Time of Acknowledgement Message  |  |
| <b>Source – where created</b> | Content Message Receiving / Acknowledgement Message Sending Software Application  |  |
| <b>Rationale – where used</b> | Content Message Sending / Acknowledgement Message Receiving system uses as needed |  |
| <b>Data Type</b>              | TS  | Time Stamp                               |
| <b>Conformance</b>            | R   | Value must always be supplied (no nulls) |
| <b>Repetitions</b>            | N   | Does not repeat                          |
| <b>Code Domain</b>            | n/a   | Formatted text                           |



|                        |   |   |
|------------------------|---|---|
| Identifier             | MSH-9   |   |
| Description            | Message Type  |   |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application  |   |
| Rationale – where used | Content Message Sending / Acknowledgement Message Receiving system uses as needed |   |
| Data Type              | MSG   | Message Type  |
| Conformance            | R   | Value must always be supplied (no nulls)                    |
| Repetitions            | N   | Does not repeat   |
| Code Domain            | fixed value   | Only the value ACK may be used for Acknowledgement Messages |

|                        |  |  |
|------------------------|--|--|
| Identifier             | MSH-10   |  |
| Description            | Message Control ID of the Acknowledgement Message                                |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application |  |
| Rationale – where used | Content Message Sending / Acknowledgement Receiving system uses as needed        |  |
| Data Type              | ST   | String                                   |
| Conformance            | R  | Value must always be supplied (no nulls) |
| Repetitions            | N  | Does not repeat                          |
| Code Domain            | n/a  | Formatted text                           |



|                        |  |   |
|------------------------|--|---|
| Identifier             | MSH-12   |   |
| Description            | Version ID   |   |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application |   |
| Rationale – where used | Content Message Sending / Acknowledgement Receiving system uses as needed        |   |
| Data Type              | VID  | Version Identifier  |
| Conformance            | R  | Value must always be supplied (no nulls)                    |
| Repetitions            | N  | Does not repeat   |
| Code Domain            | fixed value  | Only the value 2.5 may be used for Acknowledgement Messages |

|                        |  |  |
|------------------------|--|--|
| Identifier             | MSH-13   |  |
| Description            | Sequence Number  |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application |  |
| Rationale – where used | Content Message Sending / Acknowledgement Receiving system uses as needed        |  |
| Data Type              | NM   | Numeric  |
| Conformance            | O  | Value may be included at sender's discretion                       |
| Repetitions            | N  | Does not repeat  |
| Code Domain            | n/a  | Incrementing value used as Acknowledgement Message sequence number |

260

#### HL7 Segment - MSA - Message Acknowledgment

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME             |
|-----|-----|----|-----|------|------|--------|--------------------------|
| 1   | 2   | ID | R   |      | 0008 | 00018  | Acknowledgment Code      |
| 2   | 20  | ST | R   |      |      | 00010  | Message Control ID       |
| 3   | 80  | ST | B   |      |      | 00020  | Text Message             |
| 4   | 15  | NM | O   |      |      | 00021  | Expected Sequence Number |





|                               |  |  |
|-------------------------------|--|--|
| <b>Identifier</b>             | MSA-1  |  |
| <b>Description</b>            | Acknowledgement Code   |  |
| <b>Source – where created</b> | Content Message Receiving / Acknowledgement Message Sending Software Application |  |
| <b>Rationale – where used</b> | Indicates status of received content message being acknowledged                  |  |
| <b>Data Type</b>              | ID   | Coded value from predetermined list      |
| <b>Conformance</b>            | R  | Value must always be supplied (no nulls) |
| <b>Repetitions</b>            | N  | Does not repeat                          |
| <b>Code Domain</b>            | Table 0008   | HL7 Acknowledgement Codes                |

HL7 Table 0008 - Acknowledgment Code

| Value | Description  |
|-------|--|
| AA    | Original mode: Application Accept - Enhanced mode: Application acknowledgement: Accept |
| AE    | Original mode: Application Error - Enhanced mode: Application acknowledgment: Error    |
| AR    | Original mode: Application Reject - Enhanced mode: Application acknowledgment: Reject  |

|                               |  |  |
|-------------------------------|--|--|
| <b>Identifier</b>             | MSA-2  |  |
| <b>Description</b>            | Message Control ID of the message being acknowledged   |  |
| <b>Source – where created</b> | Content Message Receiving / Acknowledgement Message Sending Software Application from the content message being acknowledged       |  |
| <b>Rationale – where used</b> | Content Message Sending / Acknowledgement Message Receiving Software Application for the message being acknowledged uses as needed |  |
| <b>Data Type</b>              | ST   | String                                   |
| <b>Conformance</b>            | R  | Value must always be supplied (no nulls) |
| <b>Repetitions</b>            | N  | Does not repeat                          |
| <b>Code Domain</b>            | n/a  | Formatted text                           |



|                               |   |  |
|-------------------------------|---|--|
| <b>Identifier</b>             | MSA-4   |  |
| <b>Description</b>            | Expected sequence number  |  |
| <b>Source – where created</b> | Content Message Receiving / Acknowledgement Message Sending Software Application for the content message being acknowledged   |  |
| <b>Rationale – where used</b> | Content Message Receiving / Acknowledgement Message Sending Software Application sends sequence number of content message it expected but did not receive in the content message being acknowledged. Content Message Sending / Acknowledgement Message Receiving software application uses as needed. |  |
| <b>Data Type</b>              | NM  | Numeric                                      |
| <b>Conformance</b>            | O   | Value may be included at sender's discretion |
| <b>Repetitions</b>            | N   | Does not repeat                              |
| <b>Code Domain</b>            | n/a   | Formatted text                               |

## HL7 Segment - ERR –Error

| SEQ | LEN  | DT  | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME                |
|-----|------|-----|-----|------|------|--------|-----------------------------|
| 1   | 493  | ELD | B   | Y    |      | 00024  | Error Code and Location     |
| 2   | 18   | ERL | O   | Y    |      | 01812  | Error Location              |
| 3   | 705  | CWE | R   |      | 0357 | 01813  | HL7 Error Code              |
| 4   | 2    | ID  | R   |      | 0516 | 01814  | Severity                    |
| 5   | 705  | CWE | O   |      | 0533 | 01815  | Application Error Code      |
| 6   | 80   | ST  | O   | Y/10 |      | 01816  | Application Error Parameter |
| 7   | 2048 | TX  | O   |      |      | 01817  | Diagnostic Information      |
| 8   | 250  | TX  | O   |      |      | 01818  | User Message                |
| 9   | 20   | IS  | O   | Y    | 0517 | 01819  | Inform Person Indicator     |
| 10  | 705  | CWE | O   |      | 0518 | 01820  | Override Type               |
| 11  | 705  | CWE | O   | Y    | 0519 | 01821  | Override Reason Code        |
| 12  | 652  | XTN | O   | Y    |      | 01822  | Help Desk Contact Point     |



|                        |   |  |
|------------------------|---|--|
| Identifier             | ERR-2   |  |
| Description            | Error Location  |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                |  |
| Rationale – where used | Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |  |
| Data Type              | ERL   | Error Location                                 |
| Conformance            | O   | Value may be included at sender's discretion   |
| Repetitions            | Y   | May contain an unlimited number of repetitions |
| Code Domain            | n/a   | Formatted text                                 |

|                        |   |  |
|------------------------|---|--|
| Identifier             | ERR-3   |  |
| Description            | Error Code  |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                |  |
| Rationale – where used | Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |  |
| Data Type              | CWE   | Coded With Exceptions                    |
| Conformance            | R   | Value must always be supplied (no nulls) |
| Repetitions            | N   | Does not repeat                          |
| Code Domain            | Table 0357  | Message Error Condition Codes            |

HL7 Table 0357 - Message Error Condition Codes

| Value | Description               | Comment   |
|-------|---------------------------|---|
| 0     | Message accepted          | Success. Optional, as the AA conveys success. Used for systems that must always return a status code.   |
| 100   | Segment sequence error    | Error: The message segments were not in the proper order, or required segments are missing.   |
| 101   | Required field missing    | Error: A required field is missing from a segment   |
| 102   | Data type error           | Error: The field contained data of the wrong data type, e.g. an NM field contained "FOO".   |
| 103   | Table value not found     | Error: A field of data type ID or IS was compared against the corresponding table, and no match was found.  |
| 200   | Unsupported message type  | Rejection: The Message Type is not supported.   |
| 201   | Unsupported event code    | Rejection: The Event Code is not supported.   |
| 202   | Unsupported processing id | Rejection: The Processing ID is not supported.  |
| 203   | Unsupported version id    | Rejection: The Version ID is not supported.   |
| 204   | Unknown key identifier    | Rejection: The ID of the patient, order, etc., was not found. Used for transactions <i>other than</i> additions, e.g. transfer of a non-existent patient. |



| Value | Description              | Comment  |
|-------|--------------------------|--|
| 205   | Duplicate key identifier | Rejection: The ID of the patient, order, etc., already exists. Used in response to addition transactions (Admit, New Order, etc.). |

|                        |   |  |
|------------------------|---|--|
| Identifier             | ERR-4   |  |
| Description            | Error Severity  |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                |  |
| Rationale – where used | Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |  |
| Data Type              | ID  | Coded value from predetermined list      |
| Conformance            | R   | Value must always be supplied (no nulls) |
| Repetitions            | N   | Does not repeat                          |
| Code Domain            | Table 0516  | Error Severity                           |

HL7 Table 0516 – Error Severity

| Value | Description | Comment  |
|-------|-------------|--|
| W     | Warning     | Transaction successful, but there may issues                             |
| I     | Information | Transaction was successful but includes information e.g., inform patient |
| E     | Error       | Transaction was unsuccessful   |

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|                        |   |  |
|------------------------|---|--|
| Identifier             | ERR-7   |  |
| Description            | Diagnostic Information  |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                |  |
| Rationale – where used | Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |  |
| Data Type              | TX  | Text Data                                    |
| Conformance            | O   | Value may be included at sender's discretion |
| Repetitions            | N   | Does not repeat                              |
| Code Domain            | ASCII   | Free text                                    |

|             |              |  |
|-------------|--------------|--|
| Identifier  | ERR-8        |  |
| Description | User Message |  |



|                        |   |  |
|------------------------|---|--|
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                              |  |
| Rationale – where used | Human user of Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |  |
| Data Type              | TX  | Text Data                                    |
| Conformance            | O   | Value may be included at sender's discretion |
| Repetitions            | N   | Does not repeat                              |
| Code Domain            | ASCII   | Free text                                    |

|                        |   |  |
|------------------------|---|--|
| Identifier             | ERR-9   |  |
| Description            | Inform Person Indicator   |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                              |  |
| Rationale – where used | Human user of Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |  |
| Data Type              | IS  | Coded value from open-ended list                                   |
| Conformance            | O   | Value may be included at sender's discretion                       |
| Repetitions            | Y   | May repeat sufficient times to include all appropriate code values |
| Code Domain            | Table 0517  | Inform Person Code   |

User-Defined Table 0517 – Inform Person Code

| Value | Description           |
|-------|-----------------------|
| PAT   | Inform patient        |
| NPAT  | Do NOT inform patient |
| USR   | Inform User           |
| HD    | Inform help desk      |



|                               |   |  |
|-------------------------------|---|--|
| <b>Identifier</b>             | ERR-10  |  |
| <b>Description</b>            | Override Type   |  |
| <b>Source – where created</b> | Content Message Receiving / Acknowledgement Message Sending Software Application                              |  |
| <b>Rationale – where used</b> | Human user of Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |  |
| <b>Data Type</b>              | CWE   | Coded With Exceptions                        |
| <b>Conformance</b>            | O   | Value may be included at sender's discretion |
| <b>Repetitions</b>            | N   | Does not repeat                              |
| <b>Code Domain</b>            | Table 0518  | Override Type                                |

User-Defined Table 0518 – Override Type

| Value | Description          | Comment   |
|-------|----------------------|---|
| EXTN  | Extension Override   | Identifies an override where a service is being performed for longer than the ordered period of time.   |
| INLV  | Interval Override    | Identifies an override where a repetition of service is being performed sooner than the ordered frequency.  |
| EQV   | Equivalence Override | Identifies an override where a service is being performed against an order that the system does not recognize as equivalent to the ordered service. |



|                        |   |  |
|------------------------|---|--|
| Identifier             | ERR-11  |  |
| Description            | Override Reason Code  |  |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                              |  |
| Rationale – where used | Human user of Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |  |
| Data Type              | CWE   | Coded With Exceptions  |
| Conformance            | O   | Value may be included at sender's discretion   |
| Repetitions            | Y   | May repeat sufficient times to include all necessary code values   |
| Code Domain            | Table 0519  | Override Reasons<br><br>Note: HL7 version 2.5 has no suggested values for User-Defined Table 0519. As a consequence, Table 0519 is not shown for this Acknowledgement Component. |

|                        |   |   |
|------------------------|---|---|
| Identifier             | ERR-12  |   |
| Description            | Help Desk Contact Point   |   |
| Source – where created | Content Message Receiving / Acknowledgement Message Sending Software Application                              |   |
| Rationale – where used | Human user of Content Message Sending / Acknowledgement Message Receiving Software Application uses as needed |   |
| Data Type              | XTN   | Extended Telecommunications Number                  |
| Conformance            | O   | Value may be included at sender's discretion        |
| Repetitions            | Y   | May repeat to include all applicable contact points |
| Code Domain            | n/a   | Free text   |

#### 300 4.2.4.1 MINIMUM DATA SET

The only data required by the Acknowledgements Component are those contained in the content message being responded to.

## 5.0 CONSTRAINTS FOR REUSE

305 There are no constraints regarding use or reuse of this Acknowledgements Component. It may be used wherever Health Level Seven (HL7) Original Mode acknowledgements are required.



## 6.0 APPENDIX

### 6.1 GLOSSARY

- 310 The HITSP glossary that spans all the interoperability specifications, which can be found in the following  
folder on the HITSP site:  
<http://publicaa.ansi.org/sites/apdl/Documents/Forms/AllItems.aspx?RootFolder=http%3a%2f%2fpublicaa%2eansi%2eorg%2fsites%2fapdl%2fDocuments%2fStandards%20Activities%2fHealthcare%20Informatics%20Technology%20Standards%20Panel>
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