



HL7 INTERFACE SPECIFICATIONS

ORA: OBSERVATION REPORT ALERT ACKNOWLEDGEMENTS

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Introduction	3
Interface Workflow	3
Supported HL7 Escape Sequences	4
ORA – Observation Report Alert Acknowledgement.....	5
Rationale for Preferred Absence of PID and PV1 Segments	5
MSH Segment.....	6
PID Segment.....	7
PV1 Segment	8
ORC Segment.....	9
OBR Observation Request.....	10
PRT Segment.....	11

Introduction

This section describes HL7 Specifications. The unidirectional interface enables acknowledgement messages for orders and study results to be transferred electronically from Spok Go to the systems in which the orders and study results originated.

The on-premise gateway supports HL7 Standard Versions 2.x. Version 2.8 or higher is expected unless otherwise noted.

Interface Workflow

Spok Go informs the on-premises gateway when workflow-related events and actions occur for orders and study results. ORA HL7 messages are then created and sent by the on-premises gateway.

Supported HL7 Escape Sequences

The following HL7 escape sequences are supported in the HL7 connector. The sequence is supported for both inbound HL7 messages and outgoing HL7 ACK and NACK responses:

Escape Sequence	Converted Character Sequence
\E\	Backslash (\).
\F\	Replaced with the field separator defined in MSH.1, usually (pipe).
\R\	Replaced with the repetition separator defined in MSH.2, usually ~ (tilde).
\S\	Replaced with the component separator defined in MSH.2, usually ^ (carat).
\T\	Replaced with the sub-component separator defined in MSH.2, usually & (ampersand).
\X0A\	Carriage Return.
\X0D\	Line Feed.

NOTE: Escape sequences are case sensitive.

ORA – Observation Report Alert Acknowledgement

The HL7 ORA-R41 message functions as an observation or result acknowledgement that is used to confirm the events or actions that were taken during the handling of an order or study result.

Rationale for Preferred Absence of PID and PV1 Segments

One goal Spok has set for the Spok Go interface is to limit the output of ePHI to only what is required. The HL7 specification for an ORA-R41 message does not require a PID or PV1 segment, and the IHE standards for PCD-05 also consider these segments as optional. Because these segments are not required, Spok has chosen not to supply PID or PV1 segments in these messages by default, but does allow for their inclusion via a message-specific configuration option in the outbound HL7 connector.

Key:	
[]	Optional segment
{ }	1+ occurrences, repeated

Segment/Group	Name	Notes	Repeatable	Required
MSH	Message Header			✓
[PID]	Patient Identification	The inclusion of the PID segment in an ORA-R41 message is optional and will only occur if the outbound HL7 connector is configured to include the PID and PV1 segments in these messages.		
[PV1]	Patient Visit	The inclusion of the PV1 segment in an ORA-R41 message is optional and will only occur if the outbound HL7 connector is configured to include the PID and PV1 segments in these messages.		
[ORC]	Order Common	The original event's first ORC segment will be used (if one was provided).		
OBR	Observation Report	The original event's first OBR segment will be used.		✓
PRT	Participation			

MSH Segment

An ORA will contain one and only one MSH Segment.

The HL7 MSH (Message Header) segment is present in every HL7 ORA message and defines the message's source, purpose, and destination.

It is always the first segment in the HL7 message.

HL7 Field	Description	Required	Notes
MSH:1	Field Separator	✓	
MSH:2	Encoding Characters	✓	
MSH:3.1	Sending Application	✓	Will be the value that was received in the Receiving Application field of the originating order or result.
MSH:4.1	Sending Facility	✓	Will be the value that was received in the Receiving Facility field of the originating order or result.
MSH:5.1	Receiving Application	✓	Will be the value that was received in the Sending Application field of the originating order or result.
MSH:6.1	Receiving Facility	✓	Will be the value that was received in the Sending Facility field of the originating order or result.
MSH:7.1	Date Time	✓	Spok Go uses Coordinated Universal Time (UTC) for the output of date/time fields.
MSH:9.1	Event Type	✓	ORA
MSH:9.2	Event Trigger	✓	R41
MSH:9.3	Message Structure		ORA_R41
MSH:10	Message Control ID	✓	A unique 20-char identifier for this HL7 status report message
MSH:11.1	Processing Identifier	✓	"P" for Production
MSH:12	Version ID	✓	2.8 or greater
MSH:15	Accept Acknowledgement Type		"AL" for Always
MSH:16	Application Acknowledgement Type		"NE" for Never
MSH:17	Country Code		"USA"
MSH:18	Character Set		"ASCII"
MSH:19.1	Language Identifier		"en"
MSH:19.2	Language Text		"English"
MSH:19.3	Language Coding System		ISO639

HL7 Field	Description	Required	Notes
MSH:21.1	Message Profile Identifier		"IHE_PCD_005"
MSH:21.2	Message Profile Namespace ID		"IHE PCD"
MSH:21.3	Message Profile Universal ID		"1.3.6.1.4.1.19376.1.6.1.5.1"
MSH:21.4	Message Profile Universal ID Type		"ISO"

PID Segment

The inclusion of the PID segment in an ORA-R41 message is optional and will only occur if the outbound HL7 connector is configured to include the PID and PV1 segments in these messages.

HL7 Field	Description	Required	Notes
PID:1	Set ID	✓	
PID:3.1	Patient Identifier ID Number	✓ ¹	
PID:3.4	Patient Identifier Assigning Authority	✓ ¹	
PID:3.5	Patient Identifier Type Code	✓ ¹	
PID:5.1	Patient Last Name	✓	
PID:5.2	Patient First Name	✓	
PID:5.3	Patient Middle Name		
PID:5.4	Patient Suffix		
PID:7.1	Patient Birth Date		Spok Go uses Coordinated Universal Time (UTC) for the output of date/time fields.
PID:8.1	Patient Gender		
PID:18.1	Patient Account Number		
PID:18.4	Patient Account Assigning Authority		This field will only be populated if PID:18.1 is contains a patient account number.

1. Regardless of how many patient identifiers may have been received for a patient via an inbound message, only the Medical Record Number (MRN) that was recognized by Spok Go will sent in this message.

PV1 Segment

The inclusion of the PV1 segment in an ORA-R41 message is optional and will only occur if the outbound HL7 connector is configured to include the PID and PV1 segments in these messages.

HL7 Field	Description	Required	Notes
PV1:1	Set ID	✓	1
PV1:2.1	Patient Class	✓	
PV1:3.1	Location – Point of Care	✓	
PV1:3.2	Location – Room	✓	
PV1:3.3	Location – Bed	✓	
PV.1:3.4	Location – Facility	✓	
PV1:18.1	Patient Type		
PV1:19.1	Patient Visit Number		
PV1:19.4	Patient Visit Assigning Authority		This field will only be populated if PV1:19.1 is contains a patient visit number.
PV1:44.1	Admit Date/Time		Spok Go uses Coordinated Universal Time (UTC) for the output of date/time fields.
PV1:45.1	Discharge Date/Time		Spok Go uses Coordinated Universal Time (UTC) for the output of date/time fields.

ORC Segment

HL7 Field	Description	Notes
ORC:1.1	Order Control	<p>The ORC segment's contents will be the same as the ORC segment that was in the originating order or result (if one was provided).</p> <p>Most notably, the Filler Order Number (aka: Accession Number) that is received in both ORC:3.1 and OBR 3.1 is the identifier that uniquely persists from one message to another throughout the duration of an order or result. It is this identifier that can be used associate an acknowledgement that Spok Go sends to the source system's originating order or result.</p> <p>Spok Go uses Coordinated Universal Time (UTC) for the output of date/time fields.</p>
ORC:2.1	Placer Order Number	
ORC:3.1 ¹	Filler Order Number (aka: Accession Number)	
ORC:5.1	Order Status	
ORC:7.6	Order Priority	
ORC:11.1	Authorizing Provider ID	
ORC:11.2	Authorizing Provider Last Name	
ORC:11.3	Authorizing Provider First Name	
ORC:11.9	Assigning Authority for Authorizing Provider ID	
ORC:12.1	Ordering Provider ID	
ORC:12.2	Ordering Provider Last Name	
ORC:12.3	Ordering Provider First Name	
ORC:12.9	Assigning Authority for Ordering Provider ID	
ORC:14.1	Callback Phone Number	
ORC:16.2	Order Control Code Reason	

1. This is the same as OBR:3.1 Filler Order Number,

OBR Observation Request

An ORA will contain an observation request (OBR) segment.

HL7 Field	Description\	Notes
OBR:2.1	Placer Order Number	<p>The OBR segment's contents will be the same as the OBR segment that was in the originating order or result.</p> <p>Most notably, the Filler Order Number (aka: Accession Number) that is received in both ORC:3.1 and OBR 3.1 is the identifier that uniquely persists from one message to another throughout the duration of an order or result. It is this identifier that can be used associate an acknowledgement that Spok Go sends to the source system's originating order or result.</p> <p>Spok Go uses Coordinated Universal Time (UTC) for the output of date/time fields.</p>
OBR:3.1 ¹	Filler Order Number (aka: Accession Number)	
OBR:4.1	Universal Service Code	
OBR:4.2	Universal Service Text	
OBR:7.1	Observation Date Time	
OBR:13	Relevant Clinical Information	
OBR:16.1	Observation Provider	
OBR:16.9	Assigning Authority for Observation Provider ID	
OBR:17.1	Order Callback Phone Number	
OBR:22.1	Results Rpt / Status Change Date / Time	
OBR:27.6	Priority	
OBR:32.1	Results Interpreter	
OBR:32.1.1	Results Interpreter ID	
OBR:32.1.2	Results Interpreter Last Name	
OBR:32.1.3	Results Interpreter First Name	
OBR:34.1.1	Technician ID	
OBR:34.1.2	Technician Last Name	
OBR:34.1.3	Technician First Name	

1. This is the same as ORC:3.1 Filler Order Number

PRT Segment

The HL7 PRT segment contains the data necessary to add, update, correct, and delete from the record persons participating in the activity being transmitted.

HL7 Field	Description	Required	Notes
PRT:1	Participation Instance ID		The Spok Event Id associated with the disseminated message.
PRT:2	Action Code	✓	"AD" indicates Add
PRT:3.2	Action Reason Text		One of "Received", "Delivered", "Accepted", "Rejected" and "Undeliverable".
PRT:3.3	Action Reason Coding System		"IHE_PCD_ACM"
PRT:4.1	Participation Identifier		"AAP"
PRT:4.2	Participation Text		Alert Acknowledging Provider
PRT:4.3	Participation Coding System		HL70912
PRT:5.1 ¹	Participation Person Identifier		The user identifier for the person who participated in the status report.
PRT:5.2 ¹	Participation Person Last Name		The last name of the person who participated in the status report.
PRT:5.3 ¹	Participation Person First Name		The first name of the person who participated in the status report.
PRT:5.9 ¹	Participation Person Assigning Authority		The external system identifier associated with the user identifier.
PRT:11	Participation Begin Date/Time		The timestamp in which the participation event occurred. Spok Go uses Coordinated Universal Time (UTC) for the output of date/time fields.

1. The participant info in PRT:5 will be repeated as many times as needed for each external identifier that is known by Spok Go for the participant.