TeleTracking™

HL7 Inbound Outbound Interface Specifications

Clinical Workflow™ Suite

Version 2017.3

R27

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Overview

The **Clinical Workflow**™ (CWS) suite (formerly the **Orchestrate**™ application) HL7 inbound and outbound services will normally interface with a scheduling system of some sort. Often, this is a perioperative system that sends or receives messages to/from the Inbound and Outbound services. Whether the procedure-based workflow being tracked is in the OR, GI Lab, Cath Lab, or some other part of the hospital, the Inbound and Outbound services will interface with a scheduling system to provide incoming and outgoing updates. The **Clinical Workflow**™ suite HL7 Inbound and Outbound services require the use of the Symphonia® Library parser (third party software). Appendix A – Symphonia® Parser Definitions defines the implemented standard for Inbound and Outbound messages.

The **Clinical Workflow**™ suite can accommodate a flat file schedule interface, HL7 schedule interface, and HL7 outbound timestamp interface. This document provides the specifications for interfacing. It provides the following:

- Required format of flat files from a scheduling system

- Character limits and data types for flat file fields

- HL7 schedule events that the **Clinical Workflow**™ suite can accept

- Sample HL7 schedule event messages

- Outbound timestamp interface standards and requirements

Flat File Schedule Interface

The **Clinical Workflow**™ suite allows for a flat file interface for situations where HL7 is not available to connect to the scheduling system. The information may be either fixed width or comma delimited (,).

Flat File Field Information

The **Clinical Workflow**™ suite can accept the following information from a flat file.

Field	Description
Scheduled Time (Required)	MM/DD/YYYY HH:MM
Last Name (Required)	50-character limit
First Name (Required)	50-character limit
MRN	64-character limit
Gender	M or F
Account Number	64-character limit
Visit Number	30-character limit
Chart	32-character limit
SSN	32-character limit
Date of Birth	MM/DD/YYYY
Destination	255-character limit
Destination comments	4000-character limit
Patient comments	4000-character limit
Patient Text Field 1-5	4000-character limit
Procedure Location	100-character limit
Service Type	100-character limit
Anesthesia Type	100-character limit
Anesthesia Description	2000-character limit
Procedure Code	100-character limit
Procedure Description	2000-character limit
Procedure Comments	4000-character limit
Procedure Duration	Number
Procedure Setup Duration	Number
Procedure Cleanup Duration	Number
Procedure Patient Type	32-character limit
Add On Flag	'Y' or 'N'
Cancel Flag	'Y' or 'N'
To Follow Time	HH:MM
Procedure Text Field 1-5	4000-character limit
Staff Employee ID 1-5	32-character limit
Staff Last Name 1-5	32-character limit

Field	Description
Staff First Name 1-5	32-character limit
Staff Middle Name 1-5	32-character limit

For the flat file message to add a patient to the **Clinical Workflow**™ suite workflow, the patient message MUST contain

- Last Name
- First Name
- Schedule Time

Any other data entered in the flat file message will be added to the appropriate field on the Patient Information dialog box.

Flat File *Clinical Workflow™* Suite Features

The **Clinical Workflow**™ suite has the following Flat File features:

- Data values in the import file may also be mapped to generate events in the **Clinical Workflow**™ suite.
- Single fields in the import file may be added to multiple fields in the **Clinical Workflow**™ suite.
- Multiple fields in the import file may be combined into a single in the **Clinical Workflow**™ suite.
- Staff may be assigned for up to 5 different roles on the patient or procedure. If staff does not exist they will be added to the **Clinical Workflow**™ suite.

Sample Flat File

Below is an example of a comma separated (CSV) ASCII flat file:

"TEST","ALLYN","11/14/2011","09:15","000000062687","IN","01/25/1955","M","000000062687", "H000029232","999-9999","EMHRSRC","EMH,RESOURCE","4371","CDSTTHALIP","CD STRESS THALLIUM IN",,"EMMCARDGN","60","","STLAB 3"

HL7 Inbound Schedule Interface

HL7 Event Types Accepted by the *Clinical Workflow™ suite*

The **Clinical Workflow**™ suite Inbound Service accepts the following HL7 schedule events.

ID	Title	Expected Outcome in the *Clinical Workflow™* Suite
S12	Notification of New Appointment Booking	A new case is entered into the **Clinical Workflow**™ suite. All data fields sent via HL7 message are populated.
S13	Notification of Appointment Modification	An existing case in the **Clinical Workflow**™ suite is found, and any field (except any unique identifier) can be updated/modified with this event.
S14	Notification of Appointment Modification	An existing case in the **Clinical Workflow**™ suite is found, and any field (except any unique identifier) can be updated/modified with this event.
S15	Notification of Appointment Cancellation	An existing case in the **Clinical Workflow**™ suite marked as cancelled. If it is a case that is currently being displayed in the **Clinical Workflow**™ suite then it will display a Cancel banner.
ORMO01	Orders	Orders can be added, updated, or canceled in the **Clinical Workflow**™ suite.

Store Forward Functionality

The Inbound Service stores future appointments. On the day of the scheduled procedure, the appointment is processed in the **Clinical Workflow**™ suite. By default, each day at 6:00 PM the next day's stored forward appointments are moved to the **Clinical Workflow**™ suite so that the user can view the appointments on the Navigator Roster screen. This Rollover time is configurable by a TeleTracking implementation engineer.

Standard HL7 Segments for Inbound SIU Messages

The following standard HL7 message fields may be used in the **Clinical Workflow**™ suite Inbound service. Fields that do not specify in the Details column a location for display in the **Clinical Workflow**™ suite, can be custom configured with possible additional design and implementation fees.

MSH Message Header

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
MSH	0	**Message Header**	3	R	"MSH"
MSH	1	**Field Separator and Encoding Characters**	4	R	This field is the separator between the segment ID and the first real field. As such, it serves as the separator and defines the character to be used as a separator for the rest of the message.
MSH	2	**EncodingCharacters**	4	R	Special characters used for parsing message. Example would be "^~\&".
MSH	3	**Sending Application**	180	I	
MSH	4	**Sending Facility**	180	I	
MSH	5	**Receiving Application**	180	I	
MSH	6	**Receiving Facility**	180	I	
MSH	7	**Entry Date / Time of message**	26	I	
MSH	8	**Security**	40	I	
MSH	9	**Message Type**	16	R	Components: <message type> ^ <trigger event> SIU^S12 = New Appointment SIU^S13 = Appointment Modification SIU^S14 = Reschedule SIU^S15 = Cancel Appointment
MSH	10	**Message Control ID**	20	R	Unique identifier may be blank.
MSH	11	**Processing ID**	3	I	
MSH	12	**Version ID**	60	I	
MSH	13	**Sequence Number***	15	I	
MSH	14	**Continuation Pointer**	180	I	
MSH	15	**Accept Acknowledgement Type**	2	I	
MSH	16	**Application Acknowledgement Type**	2	I	
MSH	17	**Country Code**	2	I	
MSH	18	**Character Set**	16	I	
MSH	19	**Principal Language Of Message**	60	I	
MSH	20	**Alternate Character Set Handling Scheme**	20	I	

SCH Schedule

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
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M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
SCH	0	**Event Type**	3	R	"SCH"
SCH	1	**Placer Appointment ID**	75	I	
SCH	2	**Filler Appointment ID**	75	I	
SCH	3	**Occurrence Number**	5	I	
SCH	4	**Placer Group Number**	22	I	
SCH	5	**Schedule ID Identifier**	128	RM	Used in the **Clinical Workflow**™ suite as Unique Identifier for procedure / case.
SCH	6	**Event Reason**	200	I	
SCH	7	**Appointment Reason / Text**	2000	OM	Displayed in the **Clinical Workflow**™ suite as Procedure Description.
SCH	8	**Appointment Type / Text**	small integer	OM	Displayed in the **Clinical Workflow**™ suite as Procedure Code ID.
SCH	9	**Appointment Duration**	small integer	OM	Displayed in the **Clinical Workflow**™ suite as Duration. Must be sent in minutes.
SCH	10	**Appointment Duration Units**	200	I	
SCH	11	**Appointment Timing Quantity / Start Date Time**	14	RM	Displayed in the **Clinical Workflow**™ suite as Procedure Start Time.
SCH	12	**Placer Contact Person**	48	I	
SCH	13	**Placer Contact Phone Number**	40	I	
SCH	14	**Placer Contact Address**	106	I	
SCH	15	**Placer Contact Location**	80	I	
SCH	16	**Filler Contact Person**	38	I	
SCH	17	**Filler Contact Phone Number**	40	I	
SCH	18	**Filler Contact Address**	106	I	
SCH	19	**Filler Contact Location**	80	I	
SCH	20	**Entered By Person**	48	I	
SCH	21	**Entered By Phone Number**	40	I	
SCH	22	**Entered By Location**	80	I	
SCH	23	**Parent Placer Appointment ID**	75	I	
SCH	24	**Parent Filler Appointment ID**	75	I	
SCH	25	**Filler Status Code / Identifier**	1	OM	Displayed in the **Clinical Workflow**™ suite as Procedure Add On Flag ('+ Icon) if value = 'Y'.

PID Patient Identification

R = Required, value must be present for message to be processed by CWS.
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M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
PID	0	**Event Type**	3	R	"PID"
PID	1	**Set ID**	4	I	
PID	2	**Patient ID (Internal ID)**	64	OM	Displayed in the **Clinical Workflow**™ suite as patient's Medical Record Number.
PID	3	**Patient Identifier List**	100	I	
PID	4	**Alternate Patient ID**	100	I	
PID	5	**Patient Name**	50^50	RM	Components: <family name> ^ <given name> ^ Patient Name In Standard Format. Displayed in the **Clinical Workflow**™ suite as Patient First Name and Patient Last Name.
PID	6	**Mother's Maiden Name**	48	I	
PID	7	**Birth Date**	8	OM	Displayed in the **Clinical Workflow**™ suite as Patient's birth date. YYYYMMDD.
PID	8	**Gender**	1	OM	Displayed in the **Clinical Workflow**™ suite as Patient's Sex.
PID	9	**Patient Alias**	48	I	
PID	10	**Race**	80	I	
PID	11	**Patient Address**	106	I	
PID	12	**County Code**	30	I	
PID	13	**Home Phone Number**	40	I	
PID	14	**Business Phone Number**	40	I	
PID	15	**Primary Language**	60	I	
PID	16	**Marital Status**	80	I	
PID	17	**Religion**	80	I	
PID	18	**Patient Account Number**	128	OM	Used in the **Clinical Workflow**™ suite to uniquely identify a patient internally and externally in other systems. Displayed in the **Clinical Workflow**™ suite as Patient Account Number.
PID	19	**SSN**	32	I	
PID	20	**Driver's License Number**	25	I	
PID	21	**Mother's Identifier**	20	I	
PID	22	**Ethnic Group**	80	I	
PID	23	**Birth Place**	60	I	

Segment	#	Description	Length	Usage	Details
PID	24	**Multiple Birth Indicator**	1	I	
PID	25	**Birth Order**	2	I	
PID	26	**Citizenship**	80	I	
PID	27	**Veteran's Military Status**	60	I	
PID	28	**Nationality**	80	I	
PID	29	**Patient Death Date And Time**	26	I	
PID	30	**Patient Death Indicator**	10	I	

PV1 Patient Visit

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
PV1	0	**Event Type**	3	R	"PV1"
PV1	1	**Set ID**	4	I	
PV1	2	**Patient Class**	4	OM	Displayed in the **Clinical Workflow**™ suite as Patient Type.
PV1	3	**Assigned Patient Location**	80	I	
PV1	4	**Admission Type**	2	I	
PV1	5	**Patient Number**	20	I	
PV1	6	**Prior Patient Location**	80	I	
PV1	7	**Attending Doctor**	60	I	
PV1	8	**Referring Doctor**	60	I	
PV1	9	**Consulting Doctor**	60	I	
PV1	10	**Hospital Service**	10	I	
PV1	11	**Temporary Location**	80	I	
PV1	12	**Preadmit Test Indicator**	2	I	
PV1	13	**Readmission Indicator**	2	I	
PV1	14	**Admit Source**	3	I	
PV1	15	**Ambulatory Status**	2	I	
PV1	16	**VIP Indicator**	2	I	
PV1	17	**Admitting Doctor**	60	I	
PV1	18	**Patient Type**	4	I	
PV1	19	**Visit Number**	20	OM	Displayed in the **Clinical Workflow**™ suite as Visit Number.
PV1	20	**Financial Class**	50	I	
PV1	21	**Charge Price Indicator**	2	I	
PV1	22	**Courtesy Code**	2	I	
PV1	23	**Credit Rating**	2	I	
PV1	24	**Contract Code**	2	I	

Segment	#	Description	Length	Usage	Details
PV1	25	**Contract Effective Date**	8	I	
PV1	26	**Contract Amount**	12	I	
PV1	27	**Contract Period**	3	I	
PV1	28	**Interest Code**	2	I	
PV1	29	**Transfer To Bad Debt Code**	1	I	
PV1	30	**Transfer to Bad Debt Date**	8	I	
PV1	31	**Bad Debt Agency Code**	10	I	
PV1	32	**Bad Debt transfer Amount**	12	I	
PV1	33	**Bad Debt Recovery Amount**	12	I	
PV1	34	**Delete Account Indicator**	1	I	
PV1	35	**Delete Account Date**	8	I	
PV1	36	**Discharge Disposition**	3	I	
PV1	37	**Discharged To Location**	25	I	
PV1	38	**Diet Type**	80	I	
PV1	39	**Servicing Facility**	2	I	
PV1	40	**Bed Status**	1	I	
PV1	41	**Account Status**	2	I	
PV1	42	**Pending Location**	80	I	
PV1	43	**Prior Temporary Location**	80	I	
PV1	44	**Admit Date Time**	26	I	
PV1	45	**Discharge Date Time**	26	I	
PV1	46	**Current Patient Balance**	12	I	
PV1	47	**Total Charges**	12	I	
PV1	48	**Total Adjustments**	12	I	
PV1	49	**Total Payments**	12	I	
PV1	50	**Alternative Visit ID**	20	I	
PV1	51	**Visit Indicator**	1	I	
PV1	52	**Other Healthcare Provider**	60	I	

RGS Resource Group

R = Required, value must be present for message to be processed by CWS.
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M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
RGS	0	**Event Type**	3	R	"RGS"
RGS	1	**Set ID**	4	I	Unique Identifier for the Resource.
RGS	2	**Segment Action Code**	3	I	
RGS	3	**Resource Group ID**	200	I	Identifier for the segment Group that contains the segment group (AIS/AIL/AIP).

AIL Appointment Information – Location Resource

R = Required, value must be present for message to be processed by CWS.
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M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
AIL	0	**Event Type**	3	R	"AIL"
AIL	1	**Set ID**	4	R	
AIL	2	**Segment Action Code**	3	I	
AIL	3	**Location Resource ID**	80	RM	Components <PointOfCare>^<room>^<bed>^<facility>^<building>^<floor> Displayed in the **Clinical Workflow**™ suite as Procedure Location.
AIL	4	**Location Type**	200	I	
AIL	5	**Location Group**	200	I	
AIL	6	**Start Date Time**	26	I	
AIL	7	**Start Date Time Offset**	20	I	
AIL	8	**Start Date Time Offset Units**	200	I	
AIL	9	**Duration**	20	I	
AIL	10	**Duration Units**	200	I	
AIL	11	**Allow Substitution Code**	10	I	
AIL	12	**Filler Status Code**	200	I	

AIS Appointment Information – Service

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
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M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
AIS	0	**Event Type**	3	R	"AIS"
AIS	1	**Set ID**	4	R	
AIS	2	**Segment Action Code**	3	OM	Displayed in the **Clinical Workflow**™ suite as Anesthesia Code.
AIS	3	**Universal Service ID**	200	OM	Displayed in the **Clinical Workflow**™ suite as Service Code.
AIS	4	**Start Date Time**	26	I	
AIS	5	**Start Date Time Offset**	20	I	
AIS	6	**Start Date Time Offset Units**	200	I	
AIS	7	**Duration**	20	I	
AIS	8	**Duration Units**	200	I	
AIS	9	**Allow Substitution Code**	10	I	
AIS	10	**Filler Status Code**	200	I	
AIS	11	**Placer Supplemental Service Information**	200	I	
AIS	12	**Filler Supplemental Service Information**	200	I	

AIP Appointment Information – Personnel Resource

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
AIP	0	**Event Type**	3	R	"AIP"
AIP	1	**Set ID**	4	R	
AIP	2	**Segment Action Code**	3	I	
AIP	3	**Personnel Resource ID 1**	80	OM	Components <employee number>^<family name>^<given name^. Displayed as Provider in **Clinical Workflow**™ suite as Staff First Name, Last Name and Middle Name.
AIP	4	**Resource Role**	200	I	

Segment	#	Description	Length	Usage	Details
AIP	5	**Resource Group**	200	I	
AIP	6	**Start Date Time**	26	I	
AIP	7	**Start Date Time Offset**	20	I	
AIP	8	**Start Date Time Offset Units**	200	I	
AIP	9	**Duration**	20	I	
AIP	10	**Duration Units**	200	I	
AIP	11	**Allow Substitution Code**	10	I	
AIP	12	**Filler Status Code**	200	I	

NTE Notes and Comments

R = Required, value must be present for message to be processed by CWS.
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I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example: RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
NTE	0	**Event Type**	3	R	"NTE"
NTE	1	**Set ID**	3	I	
NTE	2	**Source Of Comment**	8	I	
NTE	3	**Procedure Comments**	4000	OM	Displayed in the **Clinical Workflow**™ suite as Procedure Description.
NTE	4	**Comment Type**	60	I	

Standard HL7 Segments for Inbound ORM Messages

MSH Message Header

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I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example: RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
MSH	0	**Message Header**	3	R	"MSH"
MSH	1	**Field Separator and Encoding Characters**	4	R	This field is the separator between the segment ID and the first real field. As such, it serves as the separator and defines the character to be used as a separator for the rest of the message.
MSH	2	**EncodingCharacters**	4	R	Special characters used for parsing message. Example would be "^~\&".
MSH	3	**Sending Application**	180	I	

Segment	#	Description	Length	Usage	Details
MSH	4	**Sending Facility**	180	I	
MSH	5	**Receiving Application**	180	I	
MSH	6	**Receiving Facility**	180	I	
MSH	7	**Entry Date / Time of message**	26	I	
MSH	8	**Security**	40	I	
MSH	9	**Message Type**	16	R	Components: <message type> ^ <trigger event> ORM^O01
MSH	10	**Message Control ID**	20	R	Unique identifier may be blank.
MSH	11	**Processing ID**	3	I	
MSH	12	**Version ID**	60	I	
MSH	13	**Sequence Number***	15	I	
MSH	14	**Continuation Pointer**	180	I	
MSH	15	**Accept Acknowledgement Type**	2	I	
MSH	16	**Application Acknowledgement Type**	2	I	
MSH	17	**Country Code**	2	I	
MSH	18	**Character Set**	16	I	
MSH	19	**Principal Language Of Message**	60	I	
MSH	20	**Alternate Character Set Handling Scheme**	20	I	

PID Patient Identification

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
PID	0	**Event Type**	3	R	"PID"
PID	1	**Set ID**	4	I	
PID	2	**Patient ID (Internal ID)**	64	OM	Displayed in the **Clinical Workflow**™ suite as patient's Medical Record Number.
PID	3	**Patient Identifier List**	100	I	
PID	4	**Alternate Patient ID**	100	I	
PID	5	**Patient Name**	50^50	RM	Components: <family name> ^ <given name> ^ Patient Name In Standard Format. Displayed in the **Clinical Workflow**™ suite

Segment	#	Description	Length	Usage	Details
					as Patient First Name and Patient Last Name.
PID	6	**Mother's Maiden Name**	48	I	
PID	7	**Birth Date**	8	OM	Displayed in the **Clinical Workflow**™ suite as Patient's birth date. YYYYMMDD.
PID	8	**Gender**	1	OM	Displayed in the **Clinical Workflow**™ suite as Patient's Sex.
PID	9	**Patient Alias**	48	I	
PID	10	**Race**	80	I	
PID	11	**Patient Address**	106	I	
PID	12	**County Code**	30	I	
PID	13	**Home Phone Number**	40	I	
PID	14	**Business Phone Number**	40	I	
PID	15	**Primary Language**	60	I	
PID	16	**Marital Status**	80	I	
PID	17	**Religion**	80	I	
PID	18	**Patient Account Number**	128	OM	Used in the **Clinical Workflow**™ suite to uniquely identify a patient internally and externally in other systems. Displayed in the **Clinical Workflow**™ suite as Patient Account Number.
PID	19	**SSN**	32	I	
PID	20	**Driver's License Number**	25	I	
PID	21	**Mother's Identifier**	20	I	
PID	22	**Ethnic Group**	80	I	
PID	23	**Birth Place**	60	I	
PID	24	**Multiple Birth Indicator**	1	I	
PID	25	**Birth Order**	2	I	
PID	26	**Citizenship**	80	I	
PID	27	**Veteran's Military Status**	60	I	
PID	28	**Nationality**	80	I	
PID	29	**Patient Death Date And Time**	26	I	
PID	30	**Patient Death Indicator**	10	I	

PV1 Patient Visit

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
PV1	0	**Event Type**	3	R	"PV1"
PV1	1	**Set ID**	4	I	
PV1	2	**Patient Class**	4	OM	Displayed in the **Clinical Workflow**™ suite as Patient Type.
PV1	3	**Assigned Patient Location**	80	I	
PV1	4	**Admission Type**	2	I	
PV1	5	**Patient Number**	20	I	
PV1	6	**Prior Patient Location**	80	I	
PV1	7	**Attending Doctor**	60	I	
PV1	8	**Referring Doctor**	60	I	
PV1	9	**Consulting Doctor**	60	I	
PV1	10	**Hospital Service**	10	I	
PV1	11	**Temporary Location**	80	I	
PV1	12	**Preadmit Test Indicator**	2	I	
PV1	13	**Readmission Indicator**	2	I	
PV1	14	**Admit Source**	3	I	
PV1	15	**Ambulatory Status**	2	I	
PV1	16	**VIP Indicator**	2	I	
PV1	17	**Admitting Doctor**	60	I	
PV1	18	**Patient Type**	4	I	
PV1	19	**Visit Number**	20	OM	Displayed in the **Clinical Workflow**™ suite as Visit Number.
PV1	20	**Financial Class**	50	I	
PV1	21	**Charge Price Indicator**	2	I	
PV1	22	**Courtesy Code**	2	I	
PV1	23	**Credit Rating**	2	I	
PV1	24	**Contract Code**	2	I	
PV1	25	**Contract Effective Date**	8	I	
PV1	26	**Contract Amount**	12	I	
PV1	27	**Contract Period**	3	I	
PV1	28	**Interest Code**	2	I	
PV1	29	**Transfer To Bad Debt Code**	1	I	
PV1	30	**Transfer to Bad Debt Date**	8	I	
PV1	31	**Bad Debt Agency Code**	10	I	

Segment	#	Description	Length	Usage	Details
PV1	32	**Bad Debt transfer Amount**	12	I	
PV1	33	**Bad Debt Recovery Amount**	12	I	
PV1	34	**Delete Account Indicator**	1	I	
PV1	35	**Delete Account Date**	8	I	
PV1	36	**Discharge Disposition**	3	I	
PV1	37	**Discharged To Location**	25	I	
PV1	38	**Diet Type**	80	I	
PV1	39	**Servicing Facility**	2	I	
PV1	40	**Bed Status**	1	I	
PV1	41	**Account Status**	2	I	
PV1	42	**Pending Location**	80	I	
PV1	43	**Prior Temporary Location**	80	I	
PV1	44	**Admit Date Time**	26	I	
PV1	45	**Discharge Date Time**	26	I	
PV1	46	**Current Patient Balance**	12	I	
PV1	47	**Total Charges**	12	I	
PV1	48	**Total Adjustments**	12	I	
PV1	49	**Total Payments**	12	I	
PV1	50	**Alternative Visit ID**	20	I	
PV1	51	**Visit Indicator**	1	I	
PV1	52	**Other Healthcare Provider**	60	I	

ORC Order Control

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Name	Length	Usage	Details
ORC	1	**Order Control**	2	R	New - "NW" Update - "SC" Cancel - "CA"
ORC	2	**Placer Order Number**	22	RM	Used in the **Clinical Workflow**™ suite as Unique Identifier for procedure / case.
ORC	3	**Filler Order Number**	22	I	
ORC	4	**Placer Group Number**	22	I	
ORC	5	**Order Status**	2	I	
ORC	6	**Response Flag**	1	I	
ORC	7	**Quantity Timing**	200	RM	Start Date Time Displayed in the **Clinical Workflow**™ suite as Procedure Start Time

Segment	#	Name	Length	Usage	Details
ORC	8	**Parent**	200	I	
ORC	9	**Date Time Of Transaction**	26	I	
ORC	10	**Entered By**	120	I	
ORC	11	**Verified By**	120	I	
ORC	12	**Ordering Provider**	120	I	
ORC	13	**Enterers Location**	80	I	
ORC	14	**Call Back Phone Number**	40	I	
ORC	15	**Order Effective Date Time**	26	I	
ORC	16	**Order Control Code Reason**	200	I	
ORC	17	**Entering Organization**	60	I	
ORC	18	**Entering Device**	60	I	
ORC	19	**Action By**	120	I	
ORC	20	**Advanced Beneficiary Notice Code**	40	I	
ORC	21	**Ordering Facility Name**	60	I	
ORC	22	**Ordering Facility Address**	106	I	
ORC	23	**Ordering Facility Phone Number**	48	I	
ORC	24	**Ordering Provider Address**	106	I	

OBR Observation Request

R = Required, value must be present for message to be processed by CWS.
O = Optional, the value is mapped to a database field but is not required for a message to process.
I = Ignored, the value is not mapped to a database field and is not required for a message to process.
M = Mapped, used in combination with R and O. The value is mapped to a CWS database field. For example:
RM (Required and mapped to a data field), OM (Optional and mapped to a data field).

Segment	#	Description	Length	Usage	Details
OBR	1	**SetID**	4	I	
OBR	2	**Placer Order Number**	22	I	
OBR	3	**Filler Order Number**	22	I	
OBR	4	**Universal Service ID**	200	RM	Procedure location
OBR	5	**Priority**	2	I	
OBR	6	**Requested Date Time**	26	I	
OBR	7	**Observation Date Time**	26	I	
OBR	8	**Observation End Date Time**	26	I	
OBR	9	**Collection Volume**	20	I	
OBR	10	**Collector Identifier**	60	I	

Segment	#	Description	Length	Usage	Details
OBR	11	**Specimen Action Code**	1	I	
OBR	12	**Danger Code**	60	I	
OBR	13	**Relevant Clinical Info**	300	I	
OBR	14	**Specimen Received Date Time**	26	I	
OBR	15	**Specimen Source**	300	I	
OBR	16	**Ordering Provider**	120	I	
OBR	17	**Order Callback Phone Number**	40	I	
OBR	18	**Placer Field 1**	60	I	
OBR	19	**Placer Field 2**	60	I	
OBR	20	**Filler Field 1**	60	I	
OBR	21	**Filler Field 2**	60	I	
OBR	22	**Results Report Status Chang Date Time**	26	I	
OBR	23	**Charge To Practice**	40	I	
OBR	24	**Diagnostic Service Section ID**	10	I	
OBR	25	**Result Status**	1	I	
OBR	26	**Parent Result**	200	I	
OBR	27	**Quantity Timing**	200	I	
OBR	28	**Result Copies To**	150	I	
OBR	29	**Parent Number**	200	I	
OBR	30	**Transportation Mode**	20	I	
OBR	31	**Reason For Study**	300	OM	Displayed in the **Clinical Workflow**™ suite as procedure description
OBR	32	**Principal Result Interpreter**	200	I	
OBR	33	**Assistant Result Interpreter**	200	I	
OBR	34	**Technician**	200	I	
OBR	35	**Transcriptionist**	200	I	
OBR	36	**Scheduled Date Time**	26	I	
OBR	37	**Number Of Sample Containers**	4	I	
OBR	38	**Transport Logistics Of Collected Sample**	60	I	
OBR	39	**Collectors Comment**	200	I	
OBR	40	**Transport Arrangement Responsibility**	60	I	
OBR	41	**Transport Arranged**	30	I	
OBR	42	**Escort Required**	1	I	
OBR	43	**Planned Patient Transport Comment**	200	I	
OBR	44	**Procedure Code**	80	I	
OBR	45	**Procedure Code Modifier**	80	I	

Mapping Standard HL7 Inbound Message Segments to the *Clinical Workflow™* Suite Fields

The Inbound Service can change the mapping of inbound data to the **Clinical Workflow**™ suite fields that differ from the standard HL7 fields described above. The Inbound Service reads an IML mapping file during initialization. This file can be modified by configuration analysts to provide a custom solution to our individual customers. See Appendix A - Mapping HL7 Fields to Clinical Workflow**™** Suite Fields for more details on the mapping file.

Clinical Workflow™ Suite Fields Available for Inbound Mapping

See Appendix B - Clinical **Workflow**™ Suite Fields for Inbound Processing for a list of **Clinical Workflow**™ suite fields that can be mapped to inbound HL7 fields.

Inbound Service Event Triggering

The Inbound Service has the ability to trigger selected events based on HL7 message field content. A selected event in the customer system can be configured during implementation to be triggered when a field from has a given value.

Sample Inbound SIU Scheduling Messages

S12 New Appointment

MSH|^~\&|OPTIME|CCF|CASE_SCHED|CCF|20110420145650|C068566|SIU^S12|918910|P|2.3
SCH||140100533|||140100533||^Bad Hip|^Total HIP|355|MIN|^^^201104200935|||||||||||||||Y^Scheduled
NTE|||Comment about the procedure
PID||60920796^^^^CCF|E14041016483^^^EPI^EPI~60920796^^^^CCF~6001584^^^WSTNH^FLA-
CCF|1406411959|Smith^Amy||19750412|F|||||||ENGL|||609207960047|376392727|||||||||||||N
PV1||2|PREA^^^900|||||||OTOL|||||||||179250701||||||||||||||||||||||||||||||||||140156655175

RGS|1||1

AIS|1|GEN|20605^ARTHROCENTESIS TMJ|201104200935|0|MIN|30|MIN|||80^LOC|1^Left
AIL|1||^OR41^^CCF
AIP|1||05257^KNOTT^PHILIP~432052^Anderson^Jeff|1.1^Primary|160^OTOL|201104200935|0|MIN|355|
MIN
AIP|2||03306^LEE^WALTER^T^^^^BillNo~435966^LEE^WALTER^T^^^^PCP~233701^LEE^WALTER^
T^^^^500008~233704^LEE^WALTER^T^^^^500007|1.2^Assisting|160^OTOL|201104200935|0|MIN|35
5|MIN

S13 Reschedule Appointment

MSH|^~\&|OPTIME|CCF|CASE_SCHED|CCF|20110420145650|C068566|SIU^S13|918910|P|2.3
SCH||140100533|||140100533||^Bad Hip|^Total HIP|355|MIN|^^^201104200935|||||||||||||||Y^Scheduled
NTE|||Comment about the procedure
PID||60920796^^^^CCF|E14041016483^^^EPI^EPI~60920796^^^^CCF~6001584^^^WSTNH^FLA-
CCF|1406411959|Smith^Amy||19750412|F|||||||ENGL|||609207960047|376392727|||||||||||||N
PV1||2|PREA^^^900|||||||OTOL|||||||||179250701||||||||||||||||||||||||||||||||||140156655175

RGS|1||1

AIS|1|GEN|20605^ARTHROCENTESIS TMJ|201104200935|0|MIN|30|MIN|||80^LOC|1^Left
AIL|1||^OR41^^CCF
AIP|1||05257^KNOTT^PHILIP~432052^Anderson^Jeff|1.1^Primary|160^OTOL|201104200935|0|MIN|355|
MIN
AIP|2||03306^LEE^WALTER^T^^^^BillNo~435966^LEE^WALTER^T^^^^PCP~233701^LEE^WALTER^
T^^^^500008~233704^LEE^WALTER^T^^^^500007|1.2^Assisting|160^OTOL|201104200935|0|MIN|35
5|MIN

S14 Update Appointment

MSH|^~\&|OPTIME|CCF|CASE_SCHED|CCF|20110420145650|C068566|SIU^S14|918910|P|2.3
SCH||140100533|||140100533||^Bad Hip|^Total HIP|355|MIN|^^^201104200935|||||||||||||||Y^Scheduled
NTE|||Comment about the procedure
PID||60920796^^^^CCF|E14041016483^^^EPI^EPI~60920796^^^^CCF~6001584^^^WSTNH^FLA-
CCF|1406411959|Smith^Amy||19750412|F|||||||ENGL|||609207960047|376392727|||||||||||||N
PV1||2|PREA^^^900|||||||OTOL|||||||||179250701|||||||||||||||||||||||||||||||||||140156655175

RGS|1||1

AIS|1|GEN|20605^ARTHROCENTESIS TMJ|201104200935|0|MIN|30|MIN|||80^LOC|1^Left
AIL|1||^OR41^^CCF
AIP|1||05257^KNOTT^PHILIP~432052^Anderson^Jeff|1.1^Primary|160^OTOL|201104200935|0|MIN|355|
MIN
AIP|2||03306^LEE^WALTER^T^^^^^BillNo~435966^LEE^WALTER^T^^^^^PCP~233701^LEE^WALTER^
T^^^^^500008~233704^LEE^WALTER^T^^^^^500007|1.2^Assisting|160^OTOL|201104200935|0|MIN|35
5|MIN

S15 Cancel Appointment

MSH|^~\&|OPTIME|CCF|CASE_SCHED|CCF|20110420145650|C068566|SIU^S15|918910|P|2.3
SCH||140100533|||140100533||^Bad Hip|^Total HIP|355|MIN|^^^201104200935|||||||||||||||Y^Scheduled
NTE|||Comment about the procedure
PID||60920796^^^^CCF|E14041016483^^^EPI^EPI~60920796^^^^CCF~6001584^^^WSTNH^FLA-
CCF|1406411959|Smith^Amy||19750412|F|||||||ENGL|||609207960047|376392727|||||||||||||N
PV1||2|PREA^^^900|||||||OTOL|||||||||179250701|||||||||||||||||||||||||||||||||||140156655175

RGS|1||1

AIS|1|GEN|20605^ARTHROCENTESIS TMJ|201104200935|0|MIN|30|MIN|||80^LOC|1^Left
AIL|1||^OR41^^CCF
AIP|1||05257^KNOTT^PHILIP~432052^Anderson^Jeff|1.1^Primary|160^OTOL|201104200935|0|MIN|355|
MIN
AIP|2||03306^LEE^WALTER^T^^^^^BillNo~435966^LEE^WALTER^T^^^^^PCP~233701^LEE^WALTER^
T^^^^^500008~233704^LEE^WALTER^T^^^^^500007|1.2^Assisting|160^OTOL|201104200935|0|MIN|35
5|MIN

Sample Inbound ORM Orders Messages

ORMO01 Orders Message

MSH|^~\&|HIS|MedCenter|LIS|MedCenter|20060307110114||ORM^O01|MSGID20060307110114|P|2.3
PID|||12001||Jones ^John ^^^Mr.||19670824|M|||123 West St.^^Denver^CO^80020^USA|||||||
PV1||O|OP^PAREG^||||2342^Jones^Bob|||OP|||||||||2|||||||||||||||||||||||||20060307110111|
ORC|NW|20060307110114
OBR|1|20060307110114||003038^Ultrasound ^L|||20060307110114

HL7 Outbound Interface

HL7 Outbound Event Types Generated by the *Clinical Workflow*™ Suite

The HL7 Outbound interface is capable of generating many different message types. With the appropriate configuration the outbound interface can generate the following types of event messages:

- ADT
- SIUS
- ORM

Standard HL7 Segments for Outbound Messages

The **Clinical Workflow**™ suite Outbound Service uses the following standard HL7 message segments:

MSH Message Header

Segment	#	Description	Length	Details
MSH	0	**Message Header**	3	"MSH"
MSH	1	**Field Separator**	1	Empty
MSH	2	**Encoding Characters**	4	^~\&
MSH	3	**Sending Application**	180	HRC-WFS.
MSH	4	**Sending Facility**	180	Empty
MSH	5	**Receiving Application**	180	Empty
MSH	6	**Receiving Facility**	180	Empty
MSH	7	**Entry Date / Time**	26	Date/Time that the sending system created the message. YYYYMMDDHHMMSS
MSH	8	**Security**	40	Empty
MSH	9	**Message Type**	3^3	Components: <message type> ^ <trigger event> SIU^S14 = Event Time Stamp
MSH	10	**Message Control ID**	20	Sequential number that gets incremented with every new message sent.
MSH	11	**Processing ID**	3	'P'
MSH	12	**Version ID**	3	Matched by receiving system to be sure the message will be interpreted correctly.
MSH	13	**Sequence Number**	15	Empty
MSH	14	**Continuation Pointer**	180	Empty
MSH	15	**Accept Acknowledgement Type**	2	'AL'

Segment	#	Description	Length	Details
MSH	16	**Application Acknowledgement Type**	2	'NE'
MSH	17	**Country Code**	2	Empty
MSH	18	**Character Set**	16	Empty
MSH	19	**Principal Language Of Message**	60	Empty
MSH	20	**Alternate Character Set Handling Scheme**	20	Empty

SCH Schedule

Segment	#	Description	Length	Details
SCH	0	**Event Type**	3	"SCH"
SCH	1	**Placer Appointment ID**	75	Empty
SCH	2	**Filler Appointment ID**	75	Empty
SCH	3	**Occurrence Number**	5	Empty
SCH	4	**Placer Group Number**	22	Empty
SCH	5	**Schedule ID Identifier**	128	Unique Identifier for procedure / case. Default sent.
SCH	6	**Event Reason**	200	Empty
SCH	7	**Appointment Reason**	2000	Procedure Description. Default sent.
SCH	8	**Appointment Type**	small integer	Procedure Code ID Default sent
SCH	9	**Appointment Duration**	small integer	Procedure Duration - value in minutes. Default not sent.
SCH	10	**Appointment Duration Units**	200	Empty
SCH	11	**Appointment Timing Quantity / Start Date Time**	14	Procedure Start Time Default sent.
SCH	12	**Placer Contact Person**	48	Empty
SCH	13	**Placer Contact Phone Number**	40	Empty
SCH	14	**Placer Contact Address**	106	Empty
SCH	15	**Placer Contact Location**	80	Empty
SCH	16	**Filler Contact Person**	38	Empty
SCH	17	**Filler Contact Phone Number**	40	Empty
SCH	18	**Filler Contact Address**	106	Empty
SCH	19	**Filler Contact Location**	80	Empty
SCH	20	**Entered By Person**	48	Employee Information, person who issued the event.

Segment	#	Description	Length	Details
				Components: ^<Employee #>^<Family Name>^<Given Name^ Default sent.
SCH	21	**Entered By Phone Number**	40	Empty
SCH	22	**Entered By Location**	80	Empty
SCH	23	**Parent Placer Appointment ID**	75	Empty
SCH	24	**Parent Filler Appointment ID**	75	Empty
SCH	25	**Filter Status Code / Identifier**	1	Empty

PID Patient Identification

Segment	#	Description	Length	Details
PID	0	**Event Type**	3	"PID"
PID	1	**Set ID**	4	Empty
PID	2	**Patient ID**	64	Unique ID, patients Medical Record Number Default sent.
PID	3	**Patient Identifier List**	100	Unique ID from HIS system Default sent.
PID	4	**Alternate Patient ID**	100	Empty
PID	5	**Patient Name**	50^50	Components: <family name> ^ <given name> ^ Patient Name In Standard Format. Default sent.
PID	6	**Mother's Maiden Name**	48	Empty
PID	7	**Date Time Of Birth**	8	Patient's birth date. YYYYMMDD. Default sent.
PID	8	**Sex**	1	Patient's sex. Default sent.
PID	9	**Patient Alias**	48	Empty
PID	10	**Race**	80	Empty
PID	11	**Patient Address**	106	Empty
PID	12	**County Code**	30	Empty
PID	13	**Home Phone Number**	40	Empty
PID	14	**Business Phone Number**	40	Empty
PID	15	**Primary Language**	60	Empty
PID	16	**Marital Status**	80	Empty
PID	17	**Religion**	80	Empty
PID	18	**Patient Account Number**	128	Unique number used to identify a patient internally and externally in other systems. Originates from the HIS system. Default sent.
PID	19	**Social Security Number**	32	Patient's social security number Default sent.
PID	20	**Driver's License Number**	25	Empty

Segment	#	Description	Length	Details
PID	21	**Mother's Identifier**	20	Empty
PID	22	**Ethnic Group**	80	Empty
PID	23	**Birth Place**	60	Empty
PID	24	**Multiple Birth Indicator**	1	Empty
PID	25	**Birth Order**	2	Empty
PID	26	**Citizenship**	80	Empty
PID	27	**Veteran's Military Status**	60	Empty
PID	28	**Nationality**	80	Empty
PID	29	**Patient Death Date And Time**	26	Empty
PID	30	**Patient Death Indicator**	10	Empty

PV1 Patient Visit

Segment	#	Description	Length	Details
PV1	0	**Event Type**	3	"PV1"
PV1	1	**Set ID**	4	Empty
PV1	2	**Patient Class**	4	Patient status, IP – In patient, OP – Out Patient Default sent.
PV1	3	**Assigned Patient Location**	80	Empty
PV1	4	**Admission Type**	2	Empty
PV1	5	**Patient Number**	20	Empty
PV1	6	**Prior Patient Location**	80	Empty
PV1	7	**Attending Doctor**	60	Empty
PV1	8	**Referring Doctor**	60	Empty
PV1	9	**Consulting Doctor**	60	Empty
PV1	10	**Hospital Service**	10	Empty
PV1	11	**Temporary Location**	80	Empty
PV1	12	**Preadmit Test Indicator**	2	Empty
PV1	13	**Readmission Indicator**	2	Empty
PV1	14	**Admit Source**	3	Empty
PV1	15	**Ambulatory Status**	2	Empty
PV1	16	**VIP Indicator**	2	Empty
PV1	17	**Admitting Doctor**	60	Empty
PV1	18	**Patient Type**	4	Patient Type. Default sent.
PV1	19	**Visit Number**	20	Visit Number Default sent
PV1	20	**Financial Class**	50	Empty
PV1	21	**Charge Price Indicator**	2	Empty
PV1	22	**Courtesy Code**	2	Empty
PV1	23	**Credit Rating**	2	Empty
PV1	24	**Contract Code**	2	Empty

Segment	#	Description	Length	Details
PV1	25	**Contract Effective Date**	8	Empty
PV1	26	**Contract Amount**	12	Empty
PV1	27	**Contract Period**	3	Empty
PV1	28	**Interest Code**	2	Empty
PV1	29	**Transfer To Bad Debt Code**	1	Empty
PV1	30	**Transfer to Bad Debt Date**	8	Empty
PV1	31	**Bad Debt Agency Code**	10	Empty
PV1	32	**Bad Debt transfer Amount**	12	Empty
PV1	33	**Bad Debt Recovery Amount**	12	Empty
PV1	34	**Delete Account Indicator**	1	Empty
PV1	35	**Delete Account Date**	8	Empty
PV1	36	**Discharge Disposition**	3	Empty
PV1	37	**Discharged To Location**	25	Empty
PV1	38	**Diet Type**	80	Empty
PV1	39	**Servicing Facility**	2	Empty
PV1	40	**Bed Status**	1	Empty
PV1	41	**Account Status**	2	Empty
PV1	42	**Pending Location**	80	Empty
PV1	43	**Prior Temporary Location**	80	Empty
PV1	44	**Admit Date Time**	26	Empty
PV1	45	**Discharge Date Time**	26	Empty
PV1	46	**Current Patient Balance**	12	Empty
PV1	47	**Total Charges**	12	Empty
PV1	48	**Total Adjustments**	12	Empty
PV1	49	**Total Payments**	12	Empty
PV1	50	**Alternative Visit ID**	20	Empty
PV1	51	**Visit Indicator**	1	Empty
PV1	52	**Other Healthcare Provider**	60	Empty

PV2 Additional Patient Visit

Segment	#	Name	Length	Details
PV2	0	**Event Type**	3	"PV2"
PV2	1	**Prior Pending Location**	80	..
PV2	2	**Accommodation Code**	60	..
PV2	3	**Admit Reason**	60	..
PV2	4	**Transfer Reason**	60	..
PV2	5	**Patient Valuables**	25	
PV2	6	**Patient Valuables Location**	25	..
PV2	7	**Visit User Code**	2	..
PV2	8	**Expected Admit Date Time**	26	..
PV2	9	**Expected Discharge Date Time**	26	..

PV2	10	**Estimated Length Of Inpatient Stay**	3	..
PV2	11	**Actual Length Of Inpatient Stay**	3	..
PV2	12	**Visit Description**	50	..
PV2	13	**Referral Source Code**	90	
PV2	14	**Previous Service Date**	8	..
PV2	15	**Employment Illness Related Indicator**	1	..
PV2	16	**Purge Status Code**	1	..
PV2	17	**Purge Status Date**	8	..
PV2	18	**Special Program Code**	2	..
PV2	19	**Retention Indicator**	1	..
PV2	20	**Expected Number Of Insurance Plans**	1	..
PV2	21	**Visit Publicity Code**	1	..
PV2	22	**Visit Protection Indicator**	1	..
PV2	23	**Clinic Organization Name**	90	
PV2	24	**Patient Status Code**	2	..
PV2	25	**Visit Priority Code**	1	..
PV2	26	**Previous Treatment Date**	8	..
PV2	27	**Expected Discharge Disposition**	2	..
PV2	28	**Signature On File Date**	8	..
PV2	29	**First Similar Illness Date**	8	..
PV2	30	**Patient Charge Adjustment Code**	80	..
PV2	31	**Recurring Service Code**	2	..
PV2	32	**Billing Media Code**	1	..
PV2	33	**Expected Surgery Date And Time**	26	..
PV2	34	**Military Partnership Code**	1	..
PV2	35	**Military Non Availability Code**	1	..
PV2	36	**Newborn Baby Indicator**	1	..
PV2	37	**Baby Detained Indicator**	1	..

AIS Appointment Information – Service

Segment	#	Description	Length	Details
AIS	0	**Event Type**	3	"AIS"
AIS	1	**Set ID**	4	"1"
AIS	2	**Segment Action Code**	3	Anesthesia Code. Default not sent.
AIS	3	**Universal Service ID**	200	Patient Comments Components <service Code>^^^^^^Episode

				comment^ Default sent.
AIS	4	**Start Date Time**	26	Empty
AIS	5	**Start Date Time Offset**	20	Empty
AIS	6	**Start Date Time Offset Units**	200	Empty
AIS	7	**Duration**	20	Empty
AIS	8	**Duration Units**	200	Empty
AIS	9	**Allow Substitution Code**	10	Empty
AIS	10	**Filler Status Code**	200	Empty
AIS	11	**Placer Supplemental Service Information**	200	Empty
AIS	12	**Filler Supplemental Service Information**	200	Empty

OBI Patient Observation

Segment	#	Description	Length	Details
OBI	0	**Event Type**	3	"OBI"
OBI	1	**Set ID**	4	Empty
OBI	2	**Value Type**	3	Empty
OBI	3	**Observation Identifier**	80	Event Information. Event Definition (event_list.event_id). Default sent.
OBI	4	**Observation Sub ID**	20	Empty
OBI	5	**Observation Value**	14	Event Date/Time Format 'YYYYMMDDhhmmss'.
OBI	6	**Units**	60	Empty
OBI	7	**References Range**	60	Empty
OBI	8	**Abnormal Flags**	10	Empty
OBI	9	**Probability**	5	Empty
OBI	10	**Nature Of Abnormal Test**	5	Empty
OBI	11	**Observation Results Status**	2	Empty
OBI	12	**Date Last Obs Normal Values**	26	Empty
OBI	13	**User Defined Access Checks**	20	Empty
OBI	14	**Date Time Of The Observation**	26	Empty
OBI	15	**Procedure ID**	60	Empty
OBI	16	**Responsible Observer**	60	Empty
OBI	17	**Observation Method**	60	Empty

OBR Observation Request

Segment	#	Description	Length	Details

Segment	#	Description	Length	Details
OBR	0	**Event Type**	3	"OBR"
OBR	1	**Set ID**	4	
OBR	2	**Placer Order Number**	22	
OBR	3	**Filler Order Number**	22	
OBR	4	**Universal Service ID**	200	Text Procedure location
OBR	5	**Priority**	2	
OBR	6	**Requested Date Time**	26	
OBR	7	**Observation Date Time**	26	
OBR	8	**Observation End Date Time**	26	
OBR	9	**Collection Volume**	20	
OBR	10	**Collector Identifier**	60	
OBR	11	**Specimen Action Code**	1	
OBR	12	**Danger Code**	60	
OBR	13	**Relevant Clinical Info**	300	
OBR	14	**Specimen Received Date Time**	26	
OBR	15	**Specimen Source**	300	
OBR	16	**Ordering Provider**	120	
OBR	17	**Order Callback Phone Number**	40	
OBR	18	**Placer Field 1**	60	
OBR	19	**Placer Field 2**	60	
OBR	20	**Filler Field 1**	60	
OBR	21	**Filler Field 2**	60	
OBR	22	**Results Report Status Change Date Time**	26	
OBR	23	**Charge To Practice**	40	
OBR	24	**Diagnostic Service Section ID**	10	
OBR	25	**Result Status**	1	
OBR	26	**Parent Result**	200	
OBR	27	**Quantity Timing**	200	
OBR	28	**Result Copies To**	150	
OBR	29	**Parent Number**	200	
OBR	30	**Transportation Mode**	20	
OBR	31	**Reason For Study**	300	Displayed in **Clinical Workflow**™ suite as procedure description
OBR	32	**Principal Result Interpreter**	200	
OBR	33	**Assistant Result Interpreter**	200	
OBR	34	**Technician**	200	
OBR	35	**Transcriptionist**	200	
OBR	36	**Scheduled Date Time**	26	
OBR	37	**Number Of Sample Containers**	4	

Segment	#	Description	Length	Details
OBR	38	**Transport Logistics Of Collected Sample**	60	
OBR	39	**Collectors Comment**	200	
OBR	40	**Transport Arrangement Responsibility**	60	
OBR	41	**Transport Arranged**	30	
OBR	42	**Escort Required**	1	
OBR	43	**Planned Patient Transport Comment**	200	
OBR	44	**Procedure Code**	80	
OBR	45	**Procedure Code Modifier**	80	

ORC Order Control

R = Required, A = Accepted, I = Not Required (Messages will not fail if populated)

Segment	#	Name	Length	Details
ORC	1	**Order Control**	2	New - "NW" Update - "SC" Cancel - "CA"
ORC	2	**Placer Order Number**	22	Order Number Mapped to Procedure External ID in **Clinical Workflow**™ suite
ORC	3	**Filler Order Number**	22	
ORC	4	**Placer Group Number**	22	
ORC	5	**Order Status**	2	
ORC	6	**Response Flag**	1	
ORC	7	**Quantity Timing**	200	Start Date Time Displayed in the **Clinical Workflow**™ suite as Procedure Start Time
ORC	8	**Parent**	200	
ORC	9	**Date Time Of Transaction**	26	
ORC	10	**Entered By**	120	
ORC	11	**Verified By**	120	
ORC	12	**Ordering Provider**	120	
ORC	13	**Enterers Location**	80	
ORC	14	**Call Back Phone Number**	40	
ORC	15	**Order Effective Date Time**	26	
ORC	16	**Order Control Code Reason**	200	
ORC	17	**Entering Organization**	60	
ORC	18	**Entering Device**	60	
ORC	19	**Action By**	120	
ORC	20	**Advanced Beneficiary Notice Code**	40	
ORC	21	**Ordering Facility Name**	60	

Segment	#	Name	Length	Details
ORC	22	**Ordering Facility Address**	106	
ORC	23	**Ordering Facility Phone Number**	48	
ORC	24	**Ordering Provider Address**	106	

ZB2 Custom Patient Specific Information

Segment	#	Name	Length	Details
ZB2	0	**Event Type**	3	"ZB2"
ZB2	1	**Isolation**	15	..
ZB2	2	**Comments**	255	..
ZB2	3	**Confidential**	10	..
ZB2	4	**Organism**	10	..
ZB2	5	**Procedures_Precautions**	255	..
ZB2	6	**Observation Indicator**	1	..
ZB2	7	**Observation Start**	10	..
ZB2	8	**Observation Stop**	10	..
ZB2	9	**Observation Duration**	10	..

ZB5 Custom Fields

Segment	#	Name	Length	Details
ZB5	0	**Event Type**	3	"ZB5"
ZB5	1	**Origin Location**	10	Data type: TLC
ZB5	2	**Destination Location**	10	Data type: TLC
ZB5	3	**Mode Of Travel**	50	Data type: String
ZB5	4	**Travel Requirements**	50	Data type: String

Mapping Outbound Message Segments to *Clinical Workflow*™ Suite Fields

The **Clinical Workflow**™ suite Outbound service can change the mapping of outbound data to HL7 fields that differ from the standard fields described above. The outbound service reads an IML mapping file during initialization. This file can be modified by configuration analysts to provide a custom solution to our individual customers. See Appendix A - Mapping HL7 Fields to Clinical Workflow™ Suite Fields for more details on the mapping file.

Clinical Workflow™ Suite Fields Available for Outbound Mapping

See Appendix C - Clinical **Workflow**™ Suite Fields for Outbound Processing for a list of **Clinical Workflow**™ suite fields that can be mapped to outbound HL7 fields.

Sample Outbound SIU Time Stamp Message

S14 Event Time Stamp

MSH|^~\&|HRC-WFS||||20110512131810||SIU^S14|0000000184|P|2.3|||AL|NE

SCH|||||140100543||^CPT 20605 ARTHROCENTESIS TMJ

    CPT 21240 ARTHROPLASTY TEMPOROMANDIBULAR||||^^^20110420063500|||||||||^import^import
PID|||||ZZOPTIME^MAINTWO||19530530|F|||||||||||444992319

PV1||||||||||||||||||||TCI

OBI||||220.5||20110512131809||||||

RGS|

AIS|1||^^^^here are some comments

Appendix A - Mapping HL7 Fields to *Clinical Workflow™* Suite Fields

The HL7paths.xml file maps the HL7 inbound message segments to the **Clinical Workflow**™ suite fields. The fields that are required by the **Clinical Workflow**™ suite have already been mapped in this file. Some of the **Clinical Workflow**™ suite fields have an empty HL7 segment map, these can be filled in with HL7 segment information as needed by customers. It is possible to modify the default mapping to meet customer needs. This could result in additional design and possible implementation fees.

Example mapping

```
<path
name="Episode.FirstName">PatientDetails[0]/PID/PatientName[0]/GivenN
ame</path>
```

Rules for Mapping HL7 Message Segments to *Clinical Workflow™* Suite Fields

- Modifying the **Clinical Workflow**™ suite field name ("Episode.FirstName" in example above) is not allowed.

- Modifying the path name between the >< symbols is allowed provided that it is a legal path defined in the .pcf file.

- Replacing path information between the >< symbols with an empty string will prevent any association with that **Clinical Workflow**™ suite field. This is allowed and is the current method for allowing place holders for feature needs.

Appendix B - *Clinical Workflow™* Suite Fields for Inbound Processing

This table shows the default inbound mapping of **Clinical Workflow**™ suite fields to standard HL7 fields.

Clinical Workflow™ Suite Field Name	Required by Clinical Workflow™ Suite	HL7 Field
Episode External ID		PID-18 PatientAccountNumber/IDNumber
Episode First Name	Yes	PID-5:2 PatientName/GivenName
Episode Last Name	Yes	PID-5:1 PatientName/FamilyName
Episode Gender		PID-8 Sex
Episode Social Security Number		PID-19 SSNNumber
Episode Medical Record Number		PID-2 PatientID
Episode.BirthDate		PID-7 DateTimeOfBirth/Time
Episode Comments		AIS-3 UniversalServiceID/AlternateText
Episode Patient Status		PV1-2 PatientClass
Episode Account Number		PID-18 PatientAccountNumber/IDNumber
Episode Text Field 1		
Episode Text Field 2		
Episode Text Field 3		
Episode Text Field 4		
Episode Text Field 5		
Episode Customer Visit Number		PV1-19 VisitNumber/IDNumber
Episode Chart ID		PID-2 PatientID
Episode Add On Flag		
Episode Customer Destination ID		
Episode Customer Leave Comments		
Episode Customer		

Clinical Workflow™ Suite Field Name	Required by Clinical Workflow™ Suite	HL7 Field
Type		
Episode Customer Leave To		
Episode Acuity ID		
Episode ADT Admit Date		
Episode ADT Expected Discharge Date		
Episode ADT Discharge Date		
Episode ADT Hospital Service		
Episode ADT Last Inpatient Admit Date		
Episode Cancel Flag		
Episode Arrive Time		
Episode Customer Height		
Episode Leave Time		
Episode Customer Middle Name		
Episode Customer Weight		
Episode Date Field 1		
Episode Date Field 2		
Episode Date Field 3		
Episode Date Field 3		
Episode Date Field 4		
Episode Date Field 5		
Episode Delete Flag		
Episode Diagnosis		
Episode Discharge Date		
Episode HL7 External ID		
Episode HL7 Internal ID		
Episode HL7 PAN		
Episode HL7VisitID		
Episode NCM Notes		
Episode Primary Complaint		
Episode Primary		

Clinical Workflow™ Suite Field Name	Required by Clinical Workflow™ Suite	HL7 Field
Language		
Episode Customer Emergency		
Episode Display Customer Flag		
Episode Last Name Alias		
Episode First Name Alias		
Episode ADT Patient Class		
Episode ADT Patient Type		
Episode ADT Assigned Facility		
Episode ADT Assigned Building		
Episode ADT Assigned Floor		
Episode ADT Assigned POC		
Episode Assigned Room		
Episode ADT Assigned Bed		
Episode ADT Temp Facility		
Episode ADT Temp Building		
Episode ADT Temp Floor		
Episode ADT Temp POC		
Episode ADT Temp Room		
Procedure Time To Follow		
Procedure Time Follow Order		
Procedure Code ID		SCH-8 AppointmentType/Text
Procedure Comments		NTE-3 Comment
Procedure Date Time Utc	Yes	SCH-11 AppointmentTimingQuantity/StartDateTime

Clinical Workflow™ Suite Field Name	Required by Clinical Workflow™ Suite	HL7 Field
Procedure Description		SCH-7 AppointmentReason/Text
Procedure Duration Minutes		SCH-9 AppointmentDuration
Procedure External ID	Yes	SCH-5 ScheduleID/Identifier
Procedure Facility		AIL-3:4 LocationResourceID/Facility
Procedure Building		AIL-3:5 LocationResourceID/Building
Procedure Floor		AIL-3:6 LocationResourceID/Floor
Procedure Point Of Care		AIL3:1 LocationResourceID/PointOfCare
Procedure Room		AIL3:2 LocationResourceID/Room
Procedure Bed		AIL3:3 LocationResourceID/Bed
Procedure Service Code ID		AIS-3 UniversalServiceID/Identifier
Procedure Anesthesia Code		AIS-2 SegmentActionCode
Procedure Text Field 1		
Procedure Text Field 2		
Procedure Text Field 3		
Procedure Text Field 4		
Procedure Text Field 5		
Procedure Add On Flag		SCH-25 FillerStatusCode/Identifier
Procedure Alert Flag		
Procedure Cancel Flag		
Procedure Cleanup Duration Minutes		
Procedure Create Date		
Procedure Date Field 1		
Procedure Date Field 2		
Procedure Date Field 3		
Procedure Date Field 4		
Procedure Date Field 5		
Procedure Delete Flag		

Clinical Workflow™ Suite Field Name	Required by Clinical Workflow™ Suite	HL7 Field
Procedure Expire Flag		
Procedure External Create Date		
Procedure Prep Description		
Procedure Customer Type		
Procedure Diagnosis		
Procedure State		
Procedure Type		
Procedure Zone ID		
Procedure Service Code ID		
Procedure Set Up Duration Minutes		
Staff Employee Number 1		AIP-3:1 ResourceGroup[0]/AppointmentsPersonnel[0]/AIP/Personnel ResourceID[0]/IDNumber
Staff First Name 1		AIP-3:3 ResourceGroup[0]/AppointmentsPersonnel[0]/AIP/Personnel ResourceID[0]/GivenName
Staff Last Name 1		AIP-3:2 ResourceGroup[0]/AppointmentsPersonnel[0]/AIP/Personnel ResourceID[0]/FamilyName
Staff Comment 1		
Staff Employee Number 2		AIP-3:1 ResourceGroup[0]/AppointmentsPersonnel[1]/AIP/Personnel ResourceID[0]/IDNumber
Staff First Name2		AIP-3:3 ResourceGroup[0]/AppointmentsPersonnel[1]/AIP/Personnel ResourceID[0]/GivenName
Staff Last Name 2		AIP-3:2 ResourceGroup[0]/AppointmentsPersonnel[1]/AIP/Personnel ResourceID[0]/FamilyName
Staff Comment 2		
Staff Employee Number 3		AIP-3:1 ResourceGroup[0]/AppointmentsPersonnel[2]/AIP/Personnel ResourceID[0]/IDNumber
Staff First Name 3		AIP-3:3 ResourceGroup[0]/AppointmentsPersonnel[2]/AIP/Personnel ResourceID[0]/GivenName
Staff Last Name 3		AIP-3:2 ResourceGroup[0]/AppointmentsPersonnel[2]/AIP/Personnel ResourceID[0]/FamilyName

Clinical Workflow™ Suite Field Name	Required by Clinical Workflow™ Suite	HL7 Field
Staff Comment 3		
Staff Employee Number 4		AIP-3:1 ResourceGroup[0]/AppointmentsPersonnel[3]/AIP/Personnel ResourceID[0]/IDNumber
Staff First Name 4		AIP-3:3 ResourceGroup[0]/AppointmentsPersonnel[3]/AIP/Personnel ResourceID[0]/GivenName
Staff Last Name 4		AIP-3:2 ResourceGroup[0]/AppointmentsPersonnel[3]/AIP/Personnel ResourceID[0]/FamilyName
Staff Comment 4		
Staff Employee Number 5		AIP-3:1 ResourceGroup[0]/AppointmentsPersonnel[4]/AIP/Personnel ResourceID[0]/IDNumber
Staff First Name 5		AIP-3:3 ResourceGroup[0]/AppointmentsPersonnel[4]/AIP/Personnel ResourceID[0]/GivenName
Staff Last Name 5		AIP-3:2 ResourceGroup[0]/AppointmentsPersonnel[4]/AIP/Personnel ResourceID[0]/FamilyName
Staff Comment 5		

Appendix C - *Clinical Workflow*™ **Suite Fields for Outbound Processing**

This table shows the default outbound mapping.

Clinical Workflow™ Suite Field	HL7 Field
Staff First Name	SCH-20:3 EnteredByPerson/GivenName
Staff Last Name	SCH-20:2 EnteredByPerson/FamilyName
Staff Employee Number	SCH20:1- EnteredByPerson/IDNumber
Episode Patient Status	PV1-2 PatientClass
Episode First Name	PID-5:2 PatientName/GivenName
Episode Last Name	PID-5:1 PatientName/FamilyName
Episode Social Security Number	PID-19 SSNNumber
Episode HL7Internal ID	PID-3 PatientIdentifierList/IDNumber
Episode External Episode ID	PID-2 PatientID/IDNumber
Episode Birth Date	PID-7 DateTimeOfBirth
Episode Gender	PID-8 Sex
Episode Account Number	PID-19 PatientAccountNumber/IDNumber
Episode Comments	AIS-3 UniversalServiceID/AlternateText
Episode Customer Type	PV1-18 PatientType
Episode Customer Visit Number	PV1-19 VisitNumber/IDNumber
Episode Medical Record Number	
Episode Primary Complaint	
Episode Chart ID	
Episode Customer Destination ID	
Episode Customer Leave Comments	
Episode Customer Leave To	
Episode Text Field 1	

Clinical Workflow™ Suite Field	HL7 Field
Episode Text Field 2	
Episode Text Field 3	
Episode Text Field 4	
Episode Text Field 5	
Episode Acuity ID	
Episode Add On Flag	
Episode ADT Admit Date	
Episode ADT Discharged Date	
Episode ADT Expected Discharge Date	
Episode ADT Hospital Service	
Episode ADT Last Inpatient Admit Date	
Episode Cancel Flag	
Episode Arrive Time	
Episode Customer Height	
Episode Customer Leave Time	
Episode Customer Middle Name	
Episode Customer Visit Number	
Episode Customer Weight	
Episode Date Field 1	
Episode Date Field 2	
Episode Date Field 3	
Episode Date Field 4	
Episode Date Field 5	
Episode Delete Flag	
Episode Diagnosis	
Episode Discharge Date	
Episode ID	
Episode HL7 External ID	
Episode HL7PAN	
Episode NCM Notes	
Episode Primary Language	
Episode Customer Emergency	
Episode Display Customer Flag	
Episode Last Name Alias	
Episode First Name Alias	
Episode ADT Patient Class	
Episode ADT Patient Type	
Episode ADT Assigned Facility	
Episode ADT Assigned Building	
Episode ADT Assigned Floor	
Episode ADT Assigned POC	

Clinical Workflow™ Suite Field	HL7 Field
Episode Assigned Room	
Episode ADT Assigned Bed	
Episode ADT Temp Facility	
Episode ADT Temp Building	
Episode ADT Temp Floor	
Episode ADT Temp POC	
Episode ADT Temp Room	
Episode ADT Temp Bed	
Procedure Service Code ID	SCH-8 AppointmentType/Text
Procedure Code ID	SCH-7 AppointmentReason/Identifier
Procedure Anesthesia Code	
Procedure External Procedure ID	SCH-5 ScheduleID/Identifier
Procedure Description	SCH-7 AppointmentReason/Text)
Procedure Date Time Utc	SCH-11 AppointmentTimingQuantity[0]/StartDateTime/Time
Procedure Comments	
Procedure Duration Minutes	
Procedure Add On Flag	
Procedure Text Field 1	
Procedure Text Field 2	
Procedure Text Field 3	
Procedure Text Field 4	
Procedure Text Field 5	
Procedure Alert Flag	
Procedure Cancel Flag	
Procedure Cleanup Duration Minutes	
Procedure Date Field 1	
Procedure Date Field 2	
Procedure Date Field 3	
Procedure Date Field 4	
Procedure Date Field 5	
Procedure Delete Flag	
Procedure Expire Flag	
Procedure External Create Date	
Procedure Prep Code	
Procedure Prep Code List	

Clinical Workflow™ Suite Field	HL7 Field
Procedure Prep Description	
Procedure Proc Code List	
Procedure Diagnosis	
Procedure State	
Procedure TF Order	
Procedure TF Time	
Procedure Type	
Procedure Zone ID	
Procedure Service Code ID	
Procedure Set Up Duration Minutes	
Event Triggered Milestone	OBI-3 ObservationIdentifier/Identifier
Event Milestone Time	OBI-5 ObservationValue

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Client Support Web Form

Use the following link to access a form for submitting technical support requests over the Web. This form is only for requests that do not require immediate responses. TeleTracking Technologies Technical Support will respond by the end of the next business day:

http://www.teletracking.com/support/#Contact-Technical-Support

TeleTracking Technologies Web Site and Client Site

www.teletracking.com

https://clients.teletracking.com