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Overview - HL7 Library in OneTouch EMR

Health Level Seven (HL7) is a messaging standard employed by applications in the health care industry. See hl7.org for details. HL7 standard eliminates or substantially reduces the custom interface programming and program maintenance that may otherwise be required. The HL7 library in One Touch EMR contains functionality for limited interaction with cooperating health care industry applications. Message semantics are defined in the HL7 2.4 standard.

Our preference is to host a secure FTP server for you (and we can provide you all credentials). We support either RSA key-based (preferred method) or password authentication. We also prefer to have separate sFTP account for each practice/client. There will be 2 folders when you login:

- Incoming – where you drop your messages (and we pick them up for processing)
- Outgoing – where we place messages for you to pick up

Practice Management & Billing applications

Practice Management & Billing platforms interact using ADT, SIU, and DFT message types. We have capability of doing uni-directional or bi-directional communications for ADT, and SIU messaging.

ADT

This is the HL7 message for patient administration. One Touch supports the following event types:

Supported ADT Incoming Messages

ADT^A01	Admit notification (treated as an A04)
ADT^A04	Register a patient (treated as an A08 if patient record with same last name, first name, date of birth, and gender already exists)
ADT^A08	Update patient information (treated as an A04 if patient with same last name, first name, date of birth, and gender is not found)
ADT^A28	Add person information (treated as an A04)
ADT^A31	Update person information (treated as an A08)

Supported ADT Outgoing Messages

ADT^A04	Register a patient (sent once for every patient)
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ADT Message Contents

The PID segment within the ADT message is the one used to pass patient demographic data. There are optional IN1 and GT1 segments for conveying information about insurances and guarantors, respectively. The following table shows what information, if present, is encoded and decoded by One Touch.

HL7 field	Description	Notes
PID.2	<i>Your patient Identifier</i>	You send us your Patient ID in this field
PID.4	<i>Our MRN</i>	We send you our patient ID in this field, which is a MRN
PID.5	Patient Name	suffix, if present, is ignored
PID.6	Mother's Maiden Name	Ignored, but present in model
PID.7	Date/Time of Birth	
PID.8	Administrative Sex	
PID.10	Race	uses HL7 table 0005
PID.11	Patient Address	
PID.13	Phone Number – Home	
PID.14	Phone Number – Business	

PID.15	Primary Language	uses HL7 table 0296
PID.16	Marital Status	uses HL7 table 0002
PID.19	Social Security Number	
PID.20	Driver's License Number	
PID.22	Ethnic Group	uses HL7 table 0189
IN1.1	Set ID	assumes that multiple IN1 segments are in priority order
IN1.4	Insurance Co Name	
IN1.5	Insurance Co Address	ignored, but in model
IN1.6	Insurance Co Contact Person	ignored, but in model
IN1.7	Insurance Co Phone Number	ignored, but in model
IN1.8	Group Number	
IN1.9	Group Name	
IN1.11	Insured's Group Emp Name	
IN1.12	Plan Effective Date	
IN1.13	Plan Expiration Date	
IN1.15	Plan Type	
IN1.16	Name of Insured	
IN1.17	Insured's Relationship to Patient	uses HL7 table 0063
IN1.18	Insured's Date of Birth	
IN1.19	Insured's Address	
IN1.36	Policy Number	
IN1.42	Insured's Employment Status	uses HL7 table 0066
IN1.43	Insured's Administrative Sex	
IN1.49	Insured's ID Number	
GT1.3	Guarantor Name	
GT1.4	Guarantor Spouse Name	
GT1.5	Guarantor Address	
GT1.6	Guarantor Ph Num – Home	
GT1.7	Guarantor Ph Num – Business	
GT1.8	Guarantor Date/Time of Birth	
GT1.9	Guarantor Administrative Sex	
GT1.11	Guarantor Relationship	uses HL7 table 0063
GT1.12	Guarantor SSN	
GT1.13	Guarantor Date – Begin	
GT1.14	Guarantor Date – End	ignored, but in model
GT1.16	Guarantor Employer Name	
GT1.17	Guarantor Employer Address	
GT1.18	Guarantor Employer Phone	

	Number	
GT1.19	Guarantor Employee ID Number	
GT1.20	Guarantor Employment Status	

ADT - Bi-Directional Communication Parameters (if desired)

For bi-directional communication, ADT messages to and from your platform have to be tracked properly. Here's how we currently support this functionality:

- In your PID segments that you are sending to us, your patient Identifier has to be in PID.2 and our MRN has to be in PID.4
- In the PID segments that we are sending to you we will also give you your patient Identifier in PID.2 and our MRN in PID.4

Scenarios for newly created patients (on the first ADT message exchanged between our systems only):

- If Patient is newly created in **your** system: your patient Identifier has to be in PID.2, but PID.4 should be blank
- If Patient is newly created in **our** system: our MRN will be in PID.4 but PID.2 will be blank.

SIU

This is the HL7 message for unsolicited (i.e., not query/response) scheduling information. One Touch supports the following event types:

Supported SIU Outgoing Messages

SIU^S12	Notification of new appointment booking (sent once for every appointment)
SIU^S14	Notification of appointment modification
SIU^S17	Notification of appointment deletion (treated as an S15)

SIU Message Contents

The PID segment within the SIU message is used to list the patient information and the provider information is listed in the AIP segment, otherwise the PV1 segment is used to list provider details. The SCH segment has the appointment date, time and other details. The following table shows what information, if present, is included by One Touch and sent out in HL7 message.

HL7 field	Description	Notes
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PID.2	<i>Your patient Identifier</i>	You send us your Patient ID in this field
PID.4	<i>Our MRN</i>	We send you our patient ID in this field, which is a MRN
PID.5	Patient Name	suffix, if present, is ignored
PID.6	Mother's Maiden Name	Ignored, but present in model
PID.7	Date/Time of Birth	
PID.8	Administrative Sex	
PID.10	Race	uses HL7 table 0005
PID.11	Patient Address	
PID.13	Phone Number – Home	
PID.14	Phone Number – Business	
PID.15	Primary Language	uses HL7 table 0296
PID.16	Marital Status	uses HL7 table 0002
PID.19	Social Security Number	
PID.20	Driver's License Number	
PID.22	Ethnic Group	uses HL7 table 0189
SCH.1	Placer Appointment ID	OneTouch Appointment ID
SCH.2	Filler Appointment ID	Your appointment ID for outbound message. Empty for S12 message. If present, then S14 message is sent instead.
SCH.6	Event Reason	Reason for visit.
SCH.7	Appointment Reason	uses HL7 table 0276
SCH.8	Appointment Type	
SCH.9	Appointment Duration	Duration in minutes
SCH.10	Appointment Duration Units	Default 'min'
SCH.11	Appointment Timing Quantity	Start and End time of the appointment is used i.e. ^^^201706131315^201706131330
SCH.25	Appointment Status	Status of appointment as customized by Practice in OneTouch
AIP.1	Sequence Number	
AIP.2	Action Code	Default is 'A' i.e. Add
AIP.3	Resource ID or Attending Doctor	Format: CustomID^LastName^FirstName
AIP.4	Resource Role	Default 'PROVIDER'
AIP.6	Start Date/Time	Format: YYYYMMDDHHMM
AIP.9	Duration	Duration in minutes
AIP-10	Duration Units	Default 'min'
PV1.1	Sequence Number	
PV1.2	Patient Class	Default: 'O' i.e. outpatient.
PV1.3	Location	Format: Location^Room^^Facility
PV1.7	Attending Doctor	Format: CustomID^LastName^FirstName^^^^^^ Assigning Authority
PV1.8	Referring Doctor	Format:

		CustomID^LastName^FirstName^^^^^^ Assigning Authority
PV1.50	Alternate Visit ID	

Supported SIU Incoming Messages

SIU^S12	Notification of new appointment booking
SIU^S14	Notification of appointment modification (treated as an S12 if appointment for given patient and appointment id is not found.)
SIU^S15	Notification of appointment cancellation
SIU^S17	Notification of appointment deletion (treated as an S15)

SIU Message Contents

The PID segment within the incoming SIU message is used to identify the patient and the provider is determined from the AIP segment, if present, otherwise the PV1 segment is used. The SCH segment should have the appointment date time. The following table shows what information, if present, is encoded by OneTouch from incoming HL7 message.

HL7 field	Description	Notes
PID.2	<i>Your patient Identifier</i>	You send us your Patient ID in this field
PID.4	<i>Our MRN</i>	We expect our patient ID in this field, which is a MRN.
PID.5	Patient Name	Format: last^first^middle^suffix
PID.6	Mother's Maiden Name	Ignored, but present in model
PID.7	Date/Time of Birth	
PID.8	Administrative Sex	
PID.10	Race	uses HL7 table 0005
PID.11	Patient Address	Format: line1^line2^city^state^zip
PID.13	Phone Number – Home	
PID.14	Phone Number – Business	
PID.15	Primary Language	uses HL7 table 0296
PID.16	Marital Status	uses HL7 table 0002
PID.19	Social Security Number	
PID.20	Driver's License Number	
PID.22	Ethnic Group	uses HL7 table 0189
SCH.1	Placer Appointment ID	OneTouch Appointment ID
SCH.2	Filler Appointment ID	Your appointment ID for outbound message. Empty for S12 message. If present, then S14 message is sent instead.
SCH.6	Event Reason	Reason for visit.
SCH.7	Appointment Reason	uses HL7 table 0276
SCH.8	Appointment Type	

SCH.9	Appointment Duration	Duration in minutes
SCH.10	Appointment Duration Units	Default 'min'
SCH.11	Appointment Timing Quantity	Start and End time of the appointment is used i.e. ^^^201706131315^201706131330
SCH.25	Appointment Status	Status of appointment as customized by Practice in OneTouch
AIP.1	Sequence Number	
AIP.2	Action Code	Default is 'A' i.e. Add
AIP.3	Resource ID or Attending Doctor	Format: CustomID^LastName^FirstName
AIP.4	Resource Role	Default 'PROVIDER'
AIP.6	Start Date/Time	Format: YYYYMMDDHHMM
AIP.9	Duration	Duration in minutes
AIP-10	Duration Units	Default 'min'
PV1.1	Sequence Number	
PV1.2	Patient Class	Default: 'O' i.e. outpatient.
PV1.3	Location	Format: Location^Room^^Facility
PV1.7	Attending Doctor	Format: CustomID^LastName^FirstName^^^^^^ Assigning Authority
PV1.8	Referring Doctor	Format: CustomID^LastName^FirstName^^^^^^ Assigning Authority
PV1.50	Alternate Visit ID	

SIU - Bi-Directional Communication Parameters (if desired)

For bi-directional communication, SIU messages to and from your platform have to be tracked properly. We currently support this functionality by using an appointment identifier

- The appointment ID on SIU messages from your system should be in SCH.1 and our ID in SCH.2 (if you already know our ID).
- We will send you our appointment ID in SCH.1 and your ID in SCH.2 (if we already know your ID).

DFT

This is the HL7 message for a financial transaction. One Touch produces a DFT message for each encounter that has a superbill.

Supported DFT Outgoing Messages

DFT^P03	Post detail financial transaction (sent once for every encounter with superbill)
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DFT Message Contents

The PID segment within the DFT message is used to identify the patient and the provider is identified in the FT1 and PV1 segments. The diagnosis and treatment are specified in the FT1 segment for each charge. The following table shows what information, if present, is encoded and decoded by One Touch besides the PID and PV1 fields documented above.

HL7 field	Description	Notes
FT1.1	Sequence Number	
FT1.2	Transaction ID	
FT1.3	Encounter ID	OneTouch ID of the encounter
FT1.4	Transaction Date	FT1.4.1 – Start Date FT1.4.1 – End Date Format: YYYYMMDD
FT1.5	Encounter Posting Date	Format: YYYYMMDD
FT1.6	Transaction Type	Always set to ‘CG’
FT1.8	Transaction Description	
FT1.10	Transaction Quantity	
FT1.16	Assigned Patient Location	FT1.16.2 – Room FT1.16.4 – Facility
FT1.19	Diagnosis Code	May or may not have associated ICD code - depending on if the provider entered one. Multiple codes are separated with repeat delimiter ~
FT1.20	Performed By	Format: ProviderID^LastName^FirstName
FT1.21	Order By	Format: ProviderID^LastName^FirstName
FT1.22	Unit Cost	
FT1.25	Procedure Code	procedure code and/or name is picked up from each of these fields and billed as a separate FT1 charge segment Format: Code^Description Multiple codes are separated with repeat delimiter ~
FT1.26	Procedure Code Modifier	Format: same as FT1.25
FT1.29	NDC Code	