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HL7 Diagnosis Specifications
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Version 1.1

Revision History
1. Added diagnosis specifications

The purpose of this document is to specify diagnosis data import to CAREWare through its HL7 Socket Interface. CAREWare can import diagnosis for ADT, BAR and SIU HL7 message types but the diagnosis data is retrieved through the DG1 segment. However, it is recommended to import diagnosis through BAR message types, for those considering to specifically import diagnosis data into CAREWare.

CAREWare processes ADT message events A01 (admit notification), A03 (discharge), A11 (cancel), A08 (Update patient information), A34 (merge patient), and A35 (merge patient). It will process SIU message events S12 (new appointment), S13 (rescheduling), and S14 (modification). CAREWare will process any BAR message event but will only import diagnoses only if those messages contain information in the DG1 segments.

Table 1.0 CAREWare's Diagnosis fields

CAREWare Field	Description	Comments
Diagnosis Date	Date of diagnosis	
ICD10/Diagnosis Code	Diagnosis Code	
Diagnosis Clinician	Clinician name	Optional

How CAREWare processes an HL7 message

Once the HL7 indexes are set to active, CAREWare will attempt to parse the incoming HL7 message into document stubs for processing. It is important to activate all three indexes for a particular import in order to get the data imported. CAREWare will look at the message type and trigger event to determine that the message is an immunization record by looking at the MSH 9 for the message type and MSH 9.1 for the trigger event. If the message type and trigger event match a message type and trigger event pair from a pre-defined list of possible importable messages, CAREWare will parse the incoming file. (For demographic imports/updates, CAREWare will only look for the message type ADT with the trigger event of A04 (Register patient), A08 (Update patient information), A34 (merge patient info. Patient ID only), and A35 (Merge patient info – Account number only). The MSH specifications can be found on table 1.1.   During parsing,

CAREWare will set the primary provider and client values based on the settings the user as set. CAREWare will also split the messages into multiple document stubs if more than one PID segment exists in the message. The PID specifications can be found on table 1.2. Once the document stubs are created, they will have a starting status of "Map Provider"

Map Provider Index

This index is used to match the provider ID (MSH 6) to a domain in CAREWare. CAREWare will create a mapping record if none exists. If a mapping is complete and an activation code is entered for the domain, CAREWare will proceed to update the status to Map Client. The Lab Test Mapping Tool's Map Provider form will list out all provider mappings. The Map Provider records will indicate whether they are active or inactive. The activation code will be generated by jProg and will be sent out upon request.

Map Client Index

This index will process client matching. It will use the matching criteria set in the provider mappings. If the patient matches the HL7 value and meets threshold then it will be updated to Process Records. The interface provides the option to manually match the clients; but if that is not set the incoming message will be deleted without moving any further in processing.

Process Records Index

Once CAREWare extracts the data necessary for an import, it will then attempt to import this data as the patient record. For demographic updates, CAREWare will update the existing record with any field(s) that is link through the field mappings. Diagnosis could be created through the process records index for ADT, BAR or SIU Feeds. But this document focuses on the BAR_Process_Records index.

Table 1.1 MSH Specifications

SEQ	LEN	OPT	ELEMENT NAME	CAREWare Field	Required For Import	Comments
1	1	R	Field Separator		Yes	Use to know what delimiter to use to seperate components when parsing.
2	4	R	Encoding Characters		Yes	
3	180	O	Sending Application		Yes	Used in conjuction with MSH 6 to ensure that unique provider mapping record. CAREWare uses this value to determine

						where the data originated from.
4	180	O	Sending Facility		No	User can set to this value instead of MSH 3.
5	180	O	Receiving Application	Alternate Provider ID	Yes	User can set to this value instead of MSH 6. If user sets this as the default patient identifier, this value will override the value MSH 6. If this is set as the alternate value, it will override MSH 6 if MSH 6 is empty.
6	180	O	Receiving Facility	Primary Provider ID	No	Used in conjunction with MSH 3 to create a unique provider mapping record. CAREWare uses this value to link to a CAREWare provider. jProg will need this value to create an activation code.
7	26	O	Date/Time Of Message		No	
8	40	O	Security		No	
9	7	R	Message Type		Yes	CAREWare will use this field to determine the message type and trigger event. Message type will be in MSH 9.0 and trigger event will be in MSH 9.1
10	20	R	Message Control ID		No	
11	3	R	Processing ID		No	
12	8	R	Version ID		No	
13	15	O	Sequence Number		No	
14	180	O	Continuation Pointer		No	
15	2	O	Accept Acknowledgment Type		No	
16	2	O	Application Acknowledgment Type		No	
17	2	O	Country Code		No	
18	6	O	Character Set		No	

| 19 | 60 | O | Principal Language Of Message | | No | |

Table 1.2 PID Specifications

SEQ	LEN	OPT	ELEMENT NAME	CAREWare Field	Required For Import	Comments
1	4	O	Set ID - Patient ID		No	
2	20	O	Patient ID (External ID)	Primary Client ID	Yes	Default field where CAREWare looks for matching patient value.
3	20	R	Patient ID (Internal ID)	Primary/Alternate Client ID	No	Can be used as matching patient identifier. If user sets this as the default patient identifier, this value will override the value PID 2. If this is set as the alternate value, it will override PID 2 if PID 2 is empty.
4	20	O	Alternate Patient ID - PID	Primary/Alternate Client ID	No	Can be used as matching patient identifier. If user sets this as the default patient identifier, this value will override the value in PID 2. If this is set as the alternate value, it will override PID 2 if PID 2 is empty.
5	48	R	Patient Name	Last Name, First Name, Middle Name	No	If patient name is not set, CAREWare will match patient's by matching patient value only. Users must set CAREWare's threshold (secondary check) to 0,
6	48	O	Mother's Maiden Name		No	Can be imported as a custom client field
7	26	O	Date/Time of Birth		No	If date of birth is not set, make sure CAREWare's threshold (secondary check) is low enough to account for this. YYYY
8	1	O	Sex	Gender	No	Only mandatory if new patient is added.
9	48	O	Patient Alias		No	Can be imported as a custom client field
10	1	O	Race	Patient Race, Race Subgroup	No	Single patient race

11	106	O	Patient Address	Address, Address Continued, City, State, Zip	No	Address^Address Continued^City^State^Zip
12	4	B	County Code	County	No	
13	40	O	Phone Number - Home	Phone	No	
14	40	O	Phone Number - Business		No	Can be imported as a custom client field
15	60	O	Primary Language		No	Can be imported as a custom client field
16	1	O	Marital Status		No	Can be imported as a custom client field
17	3	O	Religion		No	Can be imported as a custom client field
18	20	O	Patient Account Number	acct	No	
19	16	O	SSN Number - Patient		No	Can be imported as a custom client field
20	25	O	Driver's License Number - Patient		No	Can be imported as a custom client field
21	20	O	Mother's Identifier		No	Can be imported as a custom client field
22	3	O	Ethnic Group	Hispanic	No	
23	60	O	Birth Place		No	Can be imported as a custom client field
24	2	O	Multiple Birth Indicator		No	Can be imported as a custom client field
25	2	O	Birth Order		No	Can be imported as a custom client field
26	4	O	Citizenship		No	Can be imported as a custom client field
27	60	O	Veterans Military Status		No	Can be imported as a custom client field
28	80	O	Nationality		No	Can be imported as a custom client field
29	26	O	Patient Death Date and Time	deathDate	No	Sets the date of death
30	1	O	Patient Death Indicator	Vtl Status	No	Sets the enrollment status to decease

Any fields not defined here can be imported if set to other segments. If they are set to other segments, those segments must exist in the HL7 message in order to be imported. If the fields are set and the segments do not exist, CAREWare will error out stating that it is trying to grab from data from a segment that does not exist in the message.

Table 1-3. DG1 Specifications

SEQ	LEN	OPT	ELEMENT NAME	CAREWare Field	Required for Import	Comments
1	4	R	Set ID - DG1			
2	2	(B) R	Diagnosis Coding Method			
3	60	O	Diagnosis Code	Diagnosis Code (ICD10 code)	Yes	
4	40	B	Diagnosis Description			
5	26	O	Diagnosis Date/Time	Diagnosis date	Yes	
6	2	R	Diagnosis Type		Yes	
7	60	B	Major Diagnostic Category			
8	4	B	Diagnostic Related Group			
9	2	B	DRG Approval Indicator			
10	2	B	DRG Grouper Review Code			
11	60	B	Outlier Type			
12	3	B	Outlier Days			
13	12	B	Outlier Cost			
14	4	B	Grouper Version And Type			
15	2	B	Diagnosis Priority			
16	60	O	Diagnosing Clinician	Comment	No	CW saves the doctor's name in comments
17	3	O	Diagnosis Classification			
18	1	O	Confidential Indicator			
19	26	O	Attestation Date/Time			

Sample Update Patient Info Message (Minimum)

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MSH|^~\&|SENDAPP| | |PROVIDERID|||BAR^P01
PID|1|123456||BAR^TESTER||20010101|F
DG1|1|ICD-10-CM|R51|HA
(headache)|20171022230000|F|||||||||||123456789^Test^Resident
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