

Message Specifications Guide



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HL7 (Health Level 7)

Intended for use with HL7 Standards, Versions 2.1 and higher (ADT) and 2.2 and higher (Orders).

HL7 Minimum Lower Layer Protocol (MLLP)

The HL7 encoded messages must be enclosed by special characters using the HL7 Minimal Lower Layer Protocol.

<SB><HL7 message><EB><CR>

Where <SB> = 0B hex, <EB> = 1C hex, <CR> = Carriage Return.

HL7 Acknowledgments

Positive (ACK) or negative (NAK) acknowledgments can be provided to the HIS upon receipt of each transaction. The ACK will signal that the transaction has been received, and can therefore trigger the next transaction to be sent. A NAK will signal that the transaction may have an error.

CBORD's HL7 Acknowledgments are formatted in accordance with HL7 Standards, Version 2.1 and higher.

Segment	Field	Description
MSH		Message Header
MSA	1	Acknowledgment code (AA, AE, AR)
MSA	2	Message Control ID
MSA	4	Expected Sequence Number
ERR	1^3	Application Level Error (optional)

HL7 Sequence Number Checking

Sequence number checking is optional. If a sequence number is found to be in error, the CBORD acknowledgment code in MSA:1 (MSA segment, field 1) will be AR. The expected sequence number will be in MSA:4. The response of the sending system should be to send the transaction with the correct sequence number.

To resynchronize sequence numbers in an HL7 environment:

If the CBORD interface receives a transaction with a sequence number of -1, it will respond with a -1 as the expected sequence number in MSA:4, and will accept any sequence number greater than 0 *in the next message it receives*. (The resynchronizing sequence number comes from the sending application.)

If *that next message* received by CBORD contains a sequence number less than 1 (except for -1 which is used to start the resynchronization process), it will respond with the next expected sequence number. The "next expected sequence number" is an increment of 1 over the sequence number of that last message processed prior to the resynchronizing sequence. (The resynchronizing sequence number comes from CBORD.)

The HL7 acknowledgment code used in each of the above instances is AA. During resynchronization, data is not processed from the transaction and the interface console window is only used to display the status of the resynchronization. Upon restart of the interface, any sequence number is accepted.

HL7 Null Definition

A null (empty) field is recognized by its field separators (before and after) being contiguous with no characters in between.

ADT Specifications

1. HL7 ADT Interface

HL7 Event Types	Action Taken By CBORD
A01 Admit a Patient	Admit
A02 Transfer a Patient	Transfer
A03 Discharge a Patient	Discharge
A04 Register a Patient	Admit
A05 Pre-admit a Patient	Admit
A06 Transfer Outpatient to Inpatient	Admit
A07 Transfer Inpatient to Outpatient	Discharge
A08 Update Patient Information	Update
A09 Patient Departing	Discharge
A10 Patient Arriving	Admit
A11 Cancel Admit	Discharge
A12 Cancel Transfer	Transfer
A13 Cancel Discharge	Cancel Discharge
A17 Swap Patients' Locations	2 Transfers. Requires 2 PID and 2 PV1 segments (one pair per patient)
A21 Leave of Absence – Exit	Discharge
A22 Leave of Absence – Return	Admit
A31 Update Patient Information	Update
A32 Cancel Patient Arriving	Discharge
A33 Cancel Patient Departing	Cancel Discharge
A18 Merge Patient Information A34 Update Patient ID A35 Update Patient Account Number A36 Update Patient ID and Account Number	Update Patient Identifiers for current visit, unless Identifier is already in use.

1.1 HL7 ADT Message Layouts

The order of the segments, per record types, is defined below. Following these descriptions of the message structures, you will find more detailed definitions of the segments that are supported.

1.1.1 A01 Admit a Patient; A04 Register a Patient, A05 Pre-admit a Patient, A06 Transfer Outpatient to Inpatient

<u>Supported Segments</u>	<u>Required</u>	<u>Description</u>
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
AL1		Allergies
DG1		Diagnosis Information
NTE		Notes

1.1.2 A02 Transfer a Patient

<u>Supported Segments</u>	<u>Required</u>	<u>Description</u>
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
NTE		Notes

1.1.3 A03 Discharge a Patient

<u>Supported Segments</u>	<u>Required</u>	<u>Description</u>
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
DG1		Diagnosis Information
OBX		Observations/Patient Profile
NTE		Notes

1.1.4 A07 Transfer Inpatient to Outpatient

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
AL1		Allergies
DG1		Diagnosis Information
NTE		Notes

1.1.5 A08 Update Patient Information, A31 Update Patient Information

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
AL1		Allergies
DG1		Diagnosis Information
NTE		Notes

1.1.6 A09 Patient Departing

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
DG1		Diagnosis Information

1.1.7 A10 Patient Arriving

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
DG1		Diagnosis Information

1.1.8 A11 Cancel Admit

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
DG1		Diagnosis Information
NTE		Notes

1.1.9 A12 Cancel Transfer

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
DG1		Diagnosis Information

1.1.10 A13 Cancel Discharge

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
AL1		Allergies
DG1		Diagnosis Information
NTE		Notes

1.1.11 A17 Swap Patient Locations

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification for Patient 1
PV1	Y	Patient Visit for Patient 1
PV2		Patient Visit for Patient 1 – additional info
OBX		Observations/Patient Profile for Patient 1
PID	Y	Patient Identification for Patient 2
PV1	Y	Patient Visit for Patient 2
PV2		Patient Visit for Patient 2 – additional info
OBX		Observations/Patient Profile for Patient 2

1.1.12 A18 Update Patient Information (Update Patient Identifiers)

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
MRG	Y	Merge
PV1	C	Patient Visit
NTE		Notes

1.1.13 A21 Leave of Absence - Exit

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
NTE		Notes

1.1.14 A22 Leave of Absence - Return

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile
NTE		Notes

1.1.15 A32 Cancel Patient Arriving

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile

1.1.16 A33 Cancel Patient Departing

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
PV1	Y	Patient Visit
PV2		Patient Visit – additional information
OBX		Observations/Patient Profile

1.1.17 A34, A35, A36 Update Patient Information (Update Patient Identifiers)

These events are being retained for backward compatibility.

Supported Segments	Required	Description
MSH	Y	Message Header
EVN	C	Event (<i>required if no event type in MSH</i>)
PID	Y	Patient Identification
MRG	Y	Merge
PV1	C	Patient Visit
NTE		Notes –supported in future development

1.2 ADT Segments Definitions

These segment definitions include required and commonly used fields among CBORD users. For more detail on segment definitions, please refer to HL7 Standards, Version 2.1 and higher. Most fields are variable-length fields, although field lengths in online display and reports from the Nutrition Services Suite may be limited.

1.2.1 MSH - Message Header Segment

MSH Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "MSH"	Message Control
1	Field Separator	R		Message Control
2	Encoding Characters	R		Message Control
3	Sending Application	C	Constant Required if Acknowledgments are used.	Filter; Acknowledgments
4	Sending Facility	C	Constant Required for some methods of multiple database updates.	Filter
5	Receiving Application	O	Constant "CBORD"	Filter
6	Receiving Facility	C	Constant Required for some methods of multiple database updates.	Filter
7	Date/Time of Message	R	CCYYMMDDHHMM	Message Control
9	Message Type Event Type	R C	Component 1=ADT Component 2=HL7 Event type code If Event type is not provided, the use of the EVN segment must be defined at implementation.	Record Type
10	Message Control ID	R	Will be returned in ACK.	Message Control
12	Version ID	O		Message Control
13	Sequence Number	C	Required for sequence number checking.	Message Control
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

1.2.2 EVN - Event Segment

EVN Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "EVN"	Message Control
1	Event Type	C	Required if Event Type is not valued in component 2 of MSH field 9.	Record Type
2	Event Date/Time	O	CCYYMMDDHHMM	
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

9.4.2.3 PID - Patient Identification Segment

PID Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "PID"	Message Control
3	Patient ID (Internal ID)	R	MRN. CBORD will use 24 characters.	Patient ID
4	Alternate Patient ID	O		
5	Patient Name	R	Last^First. CBORD will use 250 characters, display 24, for each Last Name and First Name. Optional: Component 3 - Middle Name or Initial Component 4 - Suffix (SR, JR, MD or PH) Component 5 - Nickname	Patient Name
7	Date of Birth	O	CCYYMMDD	Birth Date
8	Sex	O	Valid values: M, F, P or L P = Female and will check Pregnant box L = Female and will check Lactating box	Sex
15	Coded Language	O	Valid Values: en, es, fr en = English es = Spanish fr = French	Patient's Language
18	Patient Account No.	O	CBORD will use 24 characters.	Billing ID
19	Patient SSN	O	Social Security ID. Numeric only.	Patient SSN
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

1.2.4 MRG - Merge Patient Information Segment

MRG Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "MRG"	Message Control
1	Prior Patient ID List	C	Component 1 is required to contain the Prior Patient MRN in order to change the patient's MRN. Component 5 may contain consistent Prior Patient identifier data. Component 6 may contain assigning facility.	Prior Patient Identifier Filter
3	Prior Patient Account Number	C	Required to change patient Billing ID. CBORD will use 24 characters.	Prior Billing ID
4	Prior Patient ID	O	Alternative location to change patient MRN.	Prior MRN
7	Prior Patient Name	O	Last^First. CBORD will use 250 characters, display 24, for each Last Name and First Name. Optional: Component 3 - Middle Name or Initial Component 4 - Suffix (SR, JR, MD or PH) Component 5 - Nickname	Patient Name
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

1.2.5 PV1 - Patient Visit Segment

PV1 Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "PV1"	Message Control
2	Patient Class	R	"I" designates inpatient transactions, which are most relevant to the CBORD system.	Filter
3	Patient Location	R	NURSING STATION^ROOM^BED CBORD will display 20 characters total.	Room/Bed
7	Attending Doctor	O	Doctor ID^Last^First CBORD will use a total of 36 characters obtained from the Doctor's Last and First Name.	Physician
15	Ambulatory Status	O	"B6" designates sex of Female and will check Pregnant box.	Pregnant
16	VIP Indicator	O	Valid values: Y -or- N	VIP
38	Insulin Indicator	O	Valid values: Y -or- N	Insulin
44	Admit Date/Time	C	CCYYMMDDHHMM Required for Admission: If value is not provided, CBORD will use EVN or system date/time.	Admit Date/Time
45	Discharge Date/Time	C	CCYYMMDDHHMM Required for Discharge: If value is not provided, CBORD will use EVN or system date/time.	Discharge Date/Time. Filter.
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

1.2.6 PV2 - Patient Visit Segment – Additional Information

PV2 Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "PV2"	Message Control
12	Protocol ID	O	Protocol code	Protocol ID
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

1.2.7 OBX - Observation Segment

OBX Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "OBX"	Message Control
1	Set ID	O		Mapping Definition
3	Observation Identifier	O	"Lactating" will check Lactating box.	Lactating
5	Observation Identifier Observation Result Value	R R	Component 1: For Height: HT For Weight: WT Component 3: Value When updating height and weight, both values must be sent inside the same transaction by using multiple OBX segments.	Data Type Data Value
6	Unit of Measure	O	Component 1 or 2. If no U of M is provided, a constant unit of measure must be defined at implementation. Valid values: IN, CM, LB or KG	Data Value Measure
14	Observation Date/Time	O	CCYYMMDDHHMM If no value is provided, CBORD will use EVN or system date/time.	Date/Time of Recorded Profile Data
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

1.2.8 AL1 - Allergies Segment

AL1 Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "AL1"	Message Control
2	Allergy Type	C	Required for Food Allergies: FA	Filter
3	Allergy Code	R	Multiple repetitions within this field and/or multiple AL1 segments represent concurrent allergies. Maximum Allergy codes may be limited by your reporting requirements, but all allergies are checked for meal compliance. Maximum Allergy code length is 12 characters. The codes are not case sensitive.	Allergy
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

1.2.9 DG1 - Diagnosis Segment

DG1 Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "DG1"	Message Control
3	Diagnosis Code	O	ICD9 code.	Diagnosis
4	Diagnosis Description	O	Natural language description of diagnosis.	Diagnosis
5	Diagnosis Start Date/Time	O	CCYYMMDDHHMM For use with coded diagnosis. If value is not provided, CBORD will use MSH Field 7. If value is not found in MSH Field 7, CBORD will use the system date/time.	Diagnosis Start Date/Time
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

1.2.10 NTE - Note Segment

NTE Field	Field Name	R/O/C*	Comments	Used by CBORD as --
0	Segment Identifier	R	Constant "NTE"	Message Control
1	Set ID	R	Used to identify placement of Note Text in the Nutrition Service Suite (NSS) record or report	Mapping Definition
3	Note Text	O		Notes
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

Orders Specifications

In CBORD's Nutrition Service Suite (NSS), a diet order can be composed of several diet restrictions. (One order may be 40 gram Protein, 1 gram Sodium, 1 gram Potassium, MAO, Full Liquid, and No Concentrated Sweets.) **All concurrent parts (diet restrictions) of a diet order must be entered at once, from one ORM transaction.** Entry of diet restrictions at a later time implies a new diet order that will supersede the last one as of the new one's start date and time.

All diet restrictions must be represented as coded elements; variable free text may be used in messaging but is not supported in NSS diet restrictions.

2. HL7 Orders Interface

HL7 Event Types	Action Taken By CBORD
NW New Order	Add new order to the card file.
CA Cancel Order	Cancel a previously sent order identified by the placer order number. Does not revoke any NTE segments attached to the order.
DC Discontinue Order	Cancel a previously sent order identified by the placer order number. Does not revoke any NTE segments attached to the order.
RP Replace Order	Cancel a previously sent order identified by the placer order number. Does not revoke any NTE segments attached to the order. Adds new order to the card file.

2.1 HL7 Orders Message Layout

The order of the segments are defined below. Following these descriptions of the message structures, you will find more detailed definitions of the segments that are supported.

2.1.1 NW- New Order, CA- Cancel Order, DC- Discontinue Order, RP – Replace Order

* Please see the CBORD HL7 ADT Interface specifications for segment details.

Supported Segments	Required	Description
MSH	Y	Message Header
*PID	Y	Patient Identification
*PV1	Y	Patient Visit
*PV2		Patient Visit – additional info
*AL1		Allergies
ORC	Y	Order Control
ODS	C	Order Dietary Service (required for NW)
NTE		Diet Order Note
*DG1		Diagnosis Information
*OBX		Observations/Patient Profile
ODT		Order Dietary Tray

2.2 Order Segments Definitions

These segment definitions include required and commonly used fields among CBORD users. For more detail on segment definitions, please refer to HL7 Standards, Version 2.2 and higher. Most fields are variable-length fields, although field lengths in online display and reports from the Nutrition Services Suite may be limited.

2.2.1 MSH - Message Header Segment

MSH Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "MSH"	Message Control
1	Field Separator	R		Message Control
2	Encoding Characters	R		Message Control
3	Sending Application	C	Constant. Required if Acknowledgments are used.	Filter; Acknowledgments
4	Sending Facility	C	Constant Required for some methods of multiple database updates.	Filter
5	Receiving Application	O	Constant "CBORD"	Filter
6	Receiving Facility	C	Constant Required for some methods of multiple database updates.	Filter
7	Date/Time of Message	R	CCYYMMDDHHMM	Message Control
9	Message Type Event Type	R R	Component 1=ORM Component 2=O01	Record Type
10	Message Control ID	R	Will be returned in ACK.	Message Control
12	Version ID	O		Message Control
13	Sequence Number	C	Required for sequence number checking.	Message Control
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

2.2.2 ORC - Order Control Segment.

ORC Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "ORC"	Message Control
1	Order Control	R	NW, CA, DC, RP	Record Type
2	Placer Order Number	R	Alphanumeric. CBORD will use 22 characters of the first component.	Placer Order Number
7	Quantity/Timing	R	Supported Components of ORC:7 are: 1 <quantity> For use with Supplements. If value is not provided, CBORD will use a default quantity of one for each supplement. If value is provided, it will be used for each supplement that is specified within that ORC grouping. Maximum quantity size is 9. 2 <interval> 3 <duration> 4 <start date/time> CCYYMMDDHHMM 5 <end date/time> CCYYMMDDHHMM 8 <text> 9 <order sequencing>	Quantity and Timing data
10	Entered By	O		Authorization
11	Verified By	O	If no value is provided in ORC Field 10, CBORD will use this field.	Authorization
12	Ordering Provider	O	If no value is provided in ORC Field 11, CBORD will use this field.	Authorization
15	Order Effective	C	CCYYMMDDHHMM If no value is provided in ORC Field 7 component 4, CBORD will use this field. If no value is then provided in this field, CBORD will use the system date/time.	Start Date
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

2.2.3 ODS - Order Dietary Service Segment

ODS Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "ODS"	Message Control
1	Dietary Service Type	R	D = Diet S = Supplement	Message Control
2	Service Period	C	<p>For use with Supplements. If value is not provided, CBORD will apply supplements to All Meals.</p> <p><u>Meal Periods:</u> 1 = Breakfast 2 = 10 AM Snack 3 = Lunch 4 = 2 PM Snack 5 = Dinner 6 = HR Snack 7 = Catering, AM 8 = Brunch 9 = Catering, Afternoon 10 = Catering, Late 11 = All Day</p> <p>*User defined Meal Periods can be created in NSS.</p> <p>A single Meal Period or User defined Meal Period, will be applied to the Supplements defined in the same ODS segment.</p> <p>Within an ORC grouping, ODS segments with the same Meal Periods will be combined as one order.</p> <p>Multiple repetitions within this field represent concurrent Meal Periods. Translation is then used to translate multiple Meal Periods into a single User defined Meal Period.</p>	Meal period
3	Dietary Service	R	<p>Multiple repetitions within this field represent concurrent Diet Restrictions or Supplements, as designated by the first field of the ODS segment.</p> <p>Maximum Diet Restriction codes may be limited by your reporting requirements, but all Diet Restrictions are checked for meal compliance.</p> <p>Maximum Diet Restriction code length is 12 characters. Maximum Supplement code length is 25 characters. Diet Restriction and Supplement codes are not case sensitive.</p>	Diet Restrictions or Supplements
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

2.2.4 NTE - Note Segment

NTE Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "NTE"	Message Control
3	Note Text	O	Maximum Note length may be limited by your reporting requirements. Note will be associated with the ODS that it follows, either a Diet Order or Supplement Order as defined above.	Diet Order or Supplement Notes
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

2.2.5 ODT - Order Dietary Tray Segment

ODT Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "ODT"	Message Control
1	Tray Type	O	Service "location" coded for the service type: MSG = Tray Ticket Message PMN = Personal Menu Note Early = Early Tray Late = Late Tray RS = Room Service NoRS = No Room Service	Service Type
2	Service Period	O	Repetition 1: Start Meal Repetition 2: End Meal For use with Services. If value is not provided, CBORD will apply service to All Meals. <u>Meal Periods:</u> 1 = Breakfast 2 = 10 AM Snack 3 = Lunch 4 = 2 PM Snack 5 = Dinner 6 = HR Snack 7 = Catering, AM 8 = Brunch 9 = Catering, Afternoon 10 = Catering, Late 11 = All Day	Service Meal Period
3	Text Instruction	C	Free Text message for the Tray Ticket Note or Personal Menu Note if indicated by Tray Type ODT.1	Tray Text
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

Enteral (Tube Feeding – TF) Orders Specifications

The Enteral Interface will accept an Order ID, Start Date/Time, End Date/Time, and authorization to create an enteral order header. It can also cancel orders. All other data in a tube feeding order (including products, rate, strength, recipe notes and administration instructions) is put in the Order Summary Note on the enteral orders screen within the Nutrition Service Suite (NSS). To leverage the functionality of the Enteral Nutrition Support module, the user runs an NSS report (Enteral Formula List) that lists the "incomplete" enteral orders. Data entry is needed to transcribe the text note to the appropriate fields on the rest of the Enteral Order screen in each patient card file record.

3 HL7 Enteral (Tube Feeding – TF) Orders Interface

HL7 Event Types	Action Taken By CBORD
NW New Order	Add new order to the card file.
CA Cancel Order	Cancel a previously sent order identified by the placer order number. Does not revoke any NTE segments attached to the order.
DC Discontinue Order	Cancel a previously sent order identified by the placer order number. Does not revoke any NTE segments attached to the order.
RP Replace Order	Cancel a previously sent order identified by the placer order number. Does not revoke any NTE segments attached to the order. Adds new order to the card file.

3.1 HL7 Enteral (Tube Feeding – TF) Orders Message Layout

The order of the segments are defined below. Following these descriptions of the message structures, you will find more detailed definitions of the segments that are supported.

- 3.1.1 NW- New Order, CA- Cancel Order, DC- Discontinue Order, RP – Replace Order
 *Please see the CBORD HL7 ADT and Orders Interface specifications for segment details.

Supported Segments	Required	Description
MSH	Y	Message Header
*PID	Y	Patient Identification
*PV1	Y	Patient Visit
*PV2		Patient Visit – additional info
*AL1		Allergies
*ORC	Y	Order Control
*ODS	C	Order Dietary Service (required for NW)
*NTE		Diet Order Note
*DG1		Diagnosis Information
*OBX		Observations/Patient Profile
*ODT		Order Dietary Tray
RXO		Order Enteral (Tube Feeding - TF)

3.2 Order Segments Definitions

These segment definitions include required and commonly used fields among CBORD users. For more detail on segment definitions, please refer to HL7 Standards, Versions 2.2 and higher. Most fields are variable-length fields, although field lengths in online display and reports from the Nutrition Services Suite may be limited.

3.2.1 MSH - Message Header Segment

MSH Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "MSH"	Message Control
1	Field Separator	R		Message Control
2	Encoding Characters	R		Message Control
3	Sending Application	C	Constant. Required if Acknowledgments are used.	Filter; Acknowledgments
4	Sending Facility	C	Constant Required for some methods of multiple database updates.	Filter
5	Receiving Application	O	Constant "CBORD"	Filter
6	Receiving Facility	C	Constant Required for some methods of multiple database updates.	Filter
7	Date/Time of Message	R	CCYYMMDDHHMM	Message Control
9	Message Type Event Type	R R	Component 1=ORM Component 2=O01 or O09 or Component 1=OMP Component 2=O09	Record Type
10	Message Control ID	R	Will be returned in ACK.	Message Control
12	Version ID	O		Message Control
13	Sequence Number	C	Required for sequence number checking.	Message Control
	Segment Separator	R		Message Control

*R/O/C = Required / Optional / Conditional

3.2.2 RXO - Order Enteral (Tube Feeding - TF) Segment

RXO Field	Field Name	R/O/C*	Comments	Used by CBORD as--
0	Segment Identifier	R	Constant "RXO"	Message Control
6	Provider's Pharmacy/Treatment Instructions	R	Component 2: Order Enteral (Tube Feeding - TF) Text Notes	Enteral Order Text

*R/O/C = Required / Optional / Conditional

Basic (Non-HL7)

At this time, the CBORD Clinical Interface does not support Basic (Non-HL7) data formats.

