LimitLIS®

HL7 Specification Requirements

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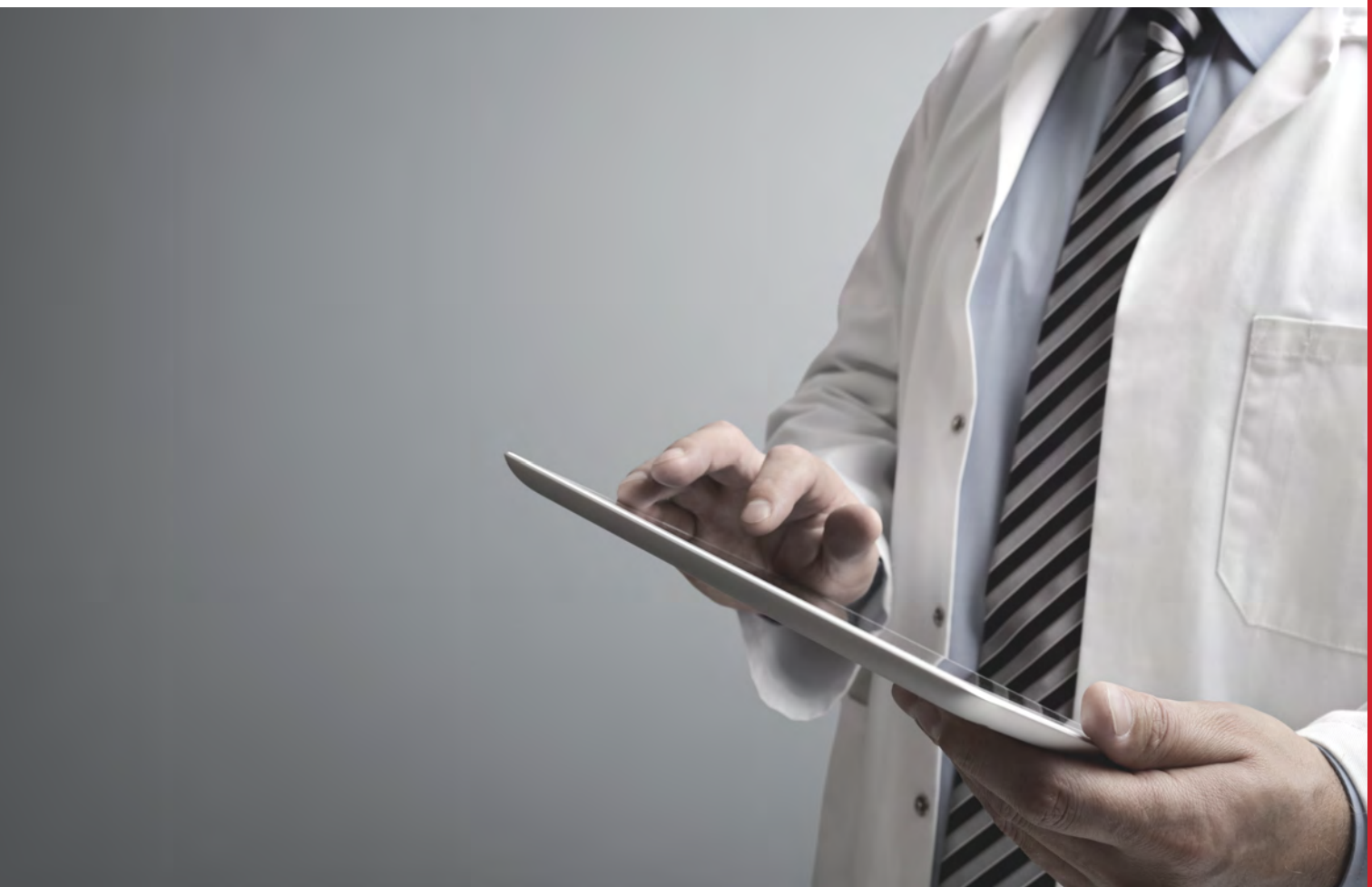

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ABOUT THIS DOCUMENT

Purpose of this Document

Health Level-7 or HL7 refers to a set of international standards for transfer of clinical and administrative data between software applications used by various healthcare providers.

Although we fully support and recommend using HL7 version 2.7, we may process HL7 files conforming to older versions of the specifications (e.g., 2.3, 2.4).

The document HL7 Specification Requirements introduces you to how HL7 is integrated into LimitLIS® system and explains data mappings to the HL7 v.2.7 Standard.

Intended Audience

These requirements are intended for the following personnel:

- EHR/EMR Providers
- EHR/EMR Vendor
- RCM Provider/Vendor

General Message structure

HL7 messages provide the means to communicate orders and results between disparate systems. HL7 messages are made up of records containing related data in a single line. The records are also known as segments. The type of message (order or result) determines the number and type of segments used.

Each segment begins with a 3-character code. Each segment is divided into fields, separated by the field delimiter character. The standard field delimiter is the vertical bar character "|" known as "the pipe."

Fields are counted starting from zero. The three-letter segment type designation is field zero. Field counting is slightly different for the MSH line. The MSH segment starts with the three-letter designation, followed by the field delimiter, followed by the declaration of additional delimiters, and then by the first field of data. Because the field delimiter is counted as its own field in the MSH segment, the first field of data is field three.

ORM – Order Messages

HL7 Order (ORM_O01) Message Structure

The table below describes the sequential structure of an HL7 Order message implemented in LimitLIS® system.

Segments with no brackets around it – Required, [] – Optional, {} - May repeat, [{}] - Optional and May repeat.

If the transmission of any segment type will cause a processing problem in the receiving system, please bring this fact to the attention of the LimitLIS® project manager.

The Order (ORM) message structure:

MSH				Message Header
	PID			Patient Identification
	PV1			Patient Visit
	[{IN1}]			Insurance
	[GT1]			Guarantor
		ORC		Common Order
			{OBR}	Orderable Test
				SPM Specimen
				[{NTE}] Notes and Comments
				[{NTE}] Medical Necessity
				[{NTE}] Medications
			{OBR}	Orderable Test
				SPM Specimen
				[{NTE}] Notes and Comments
				[{NTE}] Medical Necessity
				[{NTE}] Medications
		{DG1}		Diagnosis
		[{OBX}]		Observations/Results (POC Tests)

NOTE: **SPM** segment is required for HL7 2.5 and newer versions. For older versions, it is not used.

HL7 Order (ORM_O01) Segment Specifications – HL7 v.2.7

ORM is used to transmit information between systems about an Order. ORM messages involve changes to the order, such as new orders and information updates.

The tables below show the fields that will be used within each of the segments and the nature of the data each field contains. Below each table are placed example(s). All fields that have been greyed out are not used by LimitLIS® system. If the format does not follow the specifications below, it may cause a system error, and the order message may not be received.

If the receiving application requires the use of additional specific fields that are greyed out or not specified in this specification, please discuss this matter with the LimitLIS® project manager.

MSH – Message Header Segment

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.

The MSH segment is required.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	MSH	yes	
1	Field Separator	|	yes	Default Value, but we can support any other separator value
2	Encoding Characters	^~\&	yes	Default Value, but we can support any other values
3	Sending Application	String	yes	HL7 Provider Name
4	Sending Facility	String	yes	Facility Name/ID
5	Receiving Application	String	no	Laboratory Name/ID
6	Receiving Facility	String	no	Laboratory Name/ID
7	Date/Time of Message	YYYYMMDDHHMM	no	Date/Time of Message
8	Security			
9	Message Type	ORM^O01	yes	Static Value
10	Message Control ID	String	no	Requisition External Source ID
11	Processing ID	Code	yes	HL7 Mode: P – Production T – Training D – Debug/Testing
12	Version ID	2.7	yes	HL7 Version Number
13-25		Not Supported		

```
MSH|^~\&|HL7 Provider Name|Facility Name|Laboratory Name|Laboratory
Name|YYYYMMDDHHMM||ORM^O01|Requisition External Source ID|P|2.7
```

PID – Patient Identification Segment

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

The PID segment is required.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	PID	yes	
1	Set ID - Patient ID	1	yes	Static Value

Field #	Field Name	Value (Format)	Required	Notes
2	Patient ID	String	no	Patient External Source ID * *Will be used if PID.3 field is empty*
3	Patient Identifier List	String	yes	Patient External Source ID * *Preferred value*
4	Alternate Patient ID	String	no	Patient External Source ID * *Will be used if PID.2 and PID.3 fields are empty*
5	Patient Name	XPN format	yes	Last Name^First Name^Middle Name
6	Mother's Maiden Name			
7	Date/Time of Birth	YYYYMMDD	yes	
8	Gender	Code	yes	F – Female M – Male U - Unknown
9-10		Not Supported		
11	Patient Address	XAD format	yes	Address 1^Address 2^City^State^Zip
12	County Code			
13	Phone Number - Home	String	yes	10 digits
14-40		Not Supported		

```
PID|1||Patient External Source ID||Last Name^First Name^Middle
Name||YYYYMMDD|Gender|||Address 1^Address 2^City^State^Zip||Phone Number
```

PV1 – Patient Visit Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on an account or visit-specific basis. The default is to send account level data.

The PV1 segment is required.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	PV1	yes	
1	Set ID - PV1	1	yes	Static Value
2	Patient Class	O	yes	Static Value
3-7		Not Supported		
8	Referring Doctor	XCN format	no	Requesting Physician NPI Number^Physician Last Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI
9-19		Not Supported		
20	Financial Class	Code	yes	Insurance Medicare Facility Patient/Self Pay
21-33		Not Supported		
34	Delete Account Indicator	N	yes	Static Value
35-38		Not Supported		
39	Servicing Facility	String	no	Facility Name/ID

Field #	Field Name	Value (Format)	Required	Notes
40-54		Not Supported		

```
PV1|1|O||||||Physician NPI Number^Physician Last Name^Physician First
Name^Physician Middle
Name^^^^^^^^^^NPI||||||||||||Financial Class||||||||||||||N|||||Facility Name
```

IN1 – Insurance Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.

This segment is required and used only if the Financial Class is an Insurance Company or Medicare. It can be repeated for multiple insurance companies. The first IN1 segment will be treated as the primary.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	IN1	yes	
1	Set ID – IN1	#	yes	Sequence number
2	Health Plan ID			
3	Insurance Company ID	String	yes	Insurance Company Payer ID
4	Insurance Company Name	String	yes	Insurance Company Name
5	Insurance Company Address	XAD format	no	Insurance Company Address 1^Address 2^City^State^Zip
6	Insurance Co Contact Person			
7	Insurance Co Phone Number	String	no	10 digits
8	Group Number	String	no	Patient's Insurance Co Group Number
9-15		Not Supported		
16	Name of Insured	XPN format	yes	Subscriber Name or Patient Name if IN1.17 is SEL^Self Last Name^First Name^Middle Name
17	Insured's Relationship to Patient	Code	yes	SEL^Self SPO^Spouse CHD^Child OTN^Other
18	Insured's Date of Birth	YYYYMMDD	no	Subscriber DOB or Patient DOB if IN1.17 is SEL^Self
19	Insured's Address	XAD format	no	Subscriber Address or Patient Address if IN1.17 is SEL^Self Address 1^Address 2^City^State^Zip
20-35		Not Supported		
36	Policy Number	String	yes	Patient's Insurance Co Policy Number

Field #	Field Name	Value (Format)	Required	Notes
37-42		Not Supported		
43	Insured's Gender	Code	no	Subscriber Sex or Patient Sex if IN1.17 is SEL^Self F – Female M – Male U – Unknown
44-55		Not Supported		

```
IN1|1||Insurance Company Payer ID|Insurance Company Name|Insurance Company
Address 1^Address 2^City^State^Zip||Insurance Co Phone Number|Patient's
Insurance Co Group Number|||||||Patient Last Name^Patient First Name^Patient
Middle Name|SEL^Self|Patient DOB|Patient Address 1^Address
2^City^State^Zip||||||||||||||||Patient's Insurance Co Policy
Number|||||||Patient Sex
```

or

```
IN1|1||Insurance Company Payer ID|Insurance Company Name|Insurance Company
Address 1^Address 2^City^State^Zip||Insurance Co Phone Number|Patient's
Insurance Co Group Number|||||||Subscriber Last Name^Subscriber First
Name^Subscriber Middle Name|Insured's Relationship to Patient|Subscriber
DOB|Subscriber Address 1^Address 2^City^State^Zip||||||||||||||||Patient's
Insurance Co Policy Number|||||||Subscriber Sex
```

GT1 – Guarantor Segment

The GT1 segment contains guarantor (e.g., the person or the organization with financial responsibility for payment of a patient account) data for patient and insurance billing applications.

NOTE:

- GT1 segment is **required** if the Financial Class is **Facility**.
- In other cases, GT1 segment is optional and contains Subscriber information. If the Order file does not contain GT1 segment, the Subscriber data will be taken from IN1 segment.
- When the **Patient** is a payer himself or Relation to insured is "Self", GT1 segment is **not needed**.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	GT1	yes	
1	Set ID - GT1	1	yes	Static Value
2	Guarantor Number			
3	Guarantor Name	XPN format	yes	Subscriber Last Name^Subscriber First Name^Subscriber Middle Name or Billing Facility Name

Field #	Field Name	Value (Format)	Required	Notes
4	Guarantor Spouse Name			
5	Guarantor Address	XAD format	Yes* *optional if Subscriber	Subscriber Address 1^Address 2^City^State^Zip or Billing Facility Address 1^Address 2^City^State^Zip
6	Guarantor Phone Number	String	no	Empty if Subscriber or Billing Facility Phone Number (10 digits)
7	Guarantor Business Phone Number	String	no	Empty if Subscriber or Billing Facility Phone Number (10 digits)
8	Guarantor Date of Birth	YYYYMMDD	no	Subscriber DOB or Empty if Facility
9	Guarantor Gender	Code	no	Subscriber Sex or Empty if Facility F – Female M – Male U – Unknown
10	Guarantor Type	Code	yes	Y – for Person N – for Facility
11	Guarantor Relationship	Code	yes	SEL^Self SPO^Spouse CHD^Child OTH^Other
12-57		Not Supported		

```
GT1|1||Subscriber Last Name^Subscriber First Name^Subscriber Middle
Name||Subscriber Address1^Address 2^City^State^Zip|||Subscriber
DOB|Subscriber Sex|Y|Guarantor Relationship

or

GT1|1||Billing Facility Name||Billing Facility Address1^Address
2^City^State^Zip|Billing Facility Phone Namber|Billing Facility Phone
Namber|||N|OTH^Other
```

ORC – Common Order Segment

The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested).

The ORC segment is required. Only one ORC segment will be processed by LimitLIS®. The ORC segment should always have at least one OBR segment after it.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	ORC	yes	
1	Order Control	NW	yes	Static value (New order/service)
2	Placer Order Number	String	yes	Requisition External Source ID
3-11		Not Supported		
12	Ordering Provider	XCN format	yes	Requesting Physician NPI Number^Physician Last Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI NOTE: NPI is required and the physician must exist in the LimitLIS system.
13-34		Not Supported		

```
ORC|NW|Requisition External Source ID||||||||||Physician NPI^Physician Last
Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI
```

OBR – Observation Request Segment

The Observation Request (OBR) segment is used to transmit information specific to an order for a diagnostic study or observation, physical exam, or assessment.

The OBR segment is required and may repeat. As part of the associated ORC hierarchy, OBR should always follow ORC segment.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	OBR	yes	
1	Set ID - OBR	#	yes	Sequence number of the OBR segments within the ORC segment.
2	Placer Order Number	String	no	Requisition External Source ID
3	Filler Order Number			
4	Universal Service Identifier	CWE format	yes	Test Panel Code^Test Panel Description or Test Code^Test Description
5	Priority	R	no	Static Value
6	Requested Date/time			
7	Observation Date/Time	YYYYMMDDHHMM	yes	Collection Date
8-14		Not Supported		
15	Specimen Source	String	Yes *(for HL7 2.4 and older versions)*	Specimen Type Code or Name
16	Ordering Provider	XCN format	no	Requesting Physician NPI Number^Physician Last Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI
17-54		Not Supported		

```
OBR|1|Requisition External Source ID||Test Panel Code^Test Panel
Description|R||YYYYMMDDHHMM|||||||Specimen Type Code or Name|Physician
NPI^Physician Last Name^Physician First Name^Physician Middle Name
^^^^^^^^^^NPI

OBR|2|Requisition External Source ID||Test Code^Test
Description|R||YYYYMMDDHHMM|||||||Specimen Type Code or Name|Physician
NPI^Physician Last Name^Physician First Name^Physician Middle Name
^^^^^^^^^^NPI
```

SPM – Specimen Segment

The intent of this segment is to describe the characteristics of a specimen.

The SPM segment is required for HL7 2.5 and newer versions. For older versions, it is not used, and OBR.15 is required instead. As part of the associated OBR hierarchy, SPM should always follow OBR segment.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	SPM	yes	
1	Set ID - OBX	1	yes	Static Value
2	Specimen ID	EIP format	no	
3	Specimen Parent IDs			
4	Specimen Type	CWE format	yes	Specimen Type Code^Specimen Type Name
5-29		Not Supported		
30	Accession ID	CX format	no	
31-32		Not Supported		

```
SPM|1|Specimen ID||Specimen Type Code^Specimen Type
Name|||||||||||||||||||||||||||Accession ID
```

NTE – Notes and Comments Segment

The NTE segments are commonly used for sending Notes and Comments as well as sending Medications and Medical Necessity.

The description in the message defines the meaning of the NTE segments. For each NTE, the description in the message should include an indication of the associated group, for example "Medications". A segment without the indication will be treated as the Comment.

The default maximum length of the text of an NTE record is 75 characters. On request, the maximum length can be set according to the receiving system. Please discuss this matter with the LimitLIS® project manager.

The NTE segment is optional and may repeat. As part of the associated OBR hierarchy, NTE should follow OBR segment.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	NTE	yes	
1	Set ID - NTE	#	yes	Sequence number of the NTE segments within the OBR segment.
2	Source of Comment	P	yes	P - Orderer (placer) is source of comment. Static Value
3	Comment	String	yes	Indication of the associated group + Description: Medications + Medication Descriptions separated by a comma or Medical Necessity + Medical Necessity Description or Comments + Comment text
4-8		Not Supported		

```
NTE|1|P|Medications Medication Description1, Medication Description2
NTE|2|P|Medical Necessity text
NTE|3|P|Comments text
```

DG1 – Diagnosis Segment

The DG1 segment contains patient diagnosis information. LimitLIS® supports ICD-10 codes. For other codes, please contact the project manager.

This segment is required and may repeat.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	DG1	yes	
1	Set ID - DG1	#	yes	Sequence number
2	Diagnosis Coding Method			
3	Diagnosis Code	CWE format	yes	Diagnosis Code^Diagnosis Description
4-26		Not Supported		

```
DG1|1||Diagnosis Code^Diagnosis Description
```

OBX – Observation/Results Segment

In the HL7 Order message, implemented in LimitLIS® system, the OBX segment is used to transmit Point of Care Test results.

This segment is optional and may repeat.

Field #	Field Name	Value (Format)	Required	Notes
0	Record Type	OBX	yes	
1	Set ID - OBX	#	yes	Sequence number
2	Value Type	ST	yes	ST – String data. Static Value.
3	Observation Identifier	CWE format	yes	POC Test Code^POC Test Name
4	Observation Sub-ID			
5	Observation Value	Code	yes	P – Positive N - Negative
6-30		Not Supported		

```
OBX|1|ST|POC Test Code^POC Test Name||P
OBX|2|ST|POC Test Code^POC Test Name||N
```

ORU – Result Messages

HL7 Result (ORU_R01) Message Structure

The table below describes the sequential structure of an HL7 Result message implemented in LimitLIS® system.

Segments with no brackets around it – will be always sent, [] – Optional, {} - May repeat, [{}] - Optional and May repeat.

If the transmission of any segment type will cause a processing problem in the receiving system, please bring this fact to the attention of the LimitLIS® project manager.

The Result (ORU) message structure:

MSH						Message Header
	PID					Patient Identification
		ORC				Common Order
			{OBR}			Orderable Test
				SPM		Specimen
				{OBX}		Observations/Results
					[{NTE}]	Notes and Comments
					[{NTE}]	Outcome
				{OBX}		Observations/Results
					[{NTE}]	Notes and Comments
					[{NTE}]	Outcome
			{OBR}			Orderable Test
				SPM		Specimen
				{OBX}		Observations/Results
					[{NTE}]	Notes and Comments
					[{NTE}]	Outcome
				{OBX}		Observations/Results
					[{NTE}]	Notes and Comments
					[{NTE}]	Outcome

NOTE: **SPM** segment will be used for HL7 2.5 and newer version only.

HL7 Result (ORU_R01) Segment Specifications – HL7 v.2.7

ORU is used in response to an order and provides clinical observations. In HL7 messaging, ORU messages provide structured patient-oriented clinical data between systems.

The tables below show the fields that will be sent within each of the segments and the nature of the data each field contains. All fields that have been greyed out will not be sent. Below each table are placed example(s).

If the receiving application requires the use of additional specific fields that are greyed out or not specified in this specification, please discuss this matter with the LimitLIS® project manager.

MSH – Message Header Segment

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.

Field #	Field Name	Value (Format)	Notes
0	Record Type	MSH	
1	Field Separator	|	Default Value, but other separator values can be supported
2	Encoding Characters	^~\&	Default Value, other values can be supported
3	Sending Application	HD format	System Name^Version Number
4	Sending Facility	HD format	Provider Lab Identifier^Provider Lab Account Number
5	Receiving Application	String	HL7 Provider Name
6	Receiving Facility	HD format	Facility Name^EHR Account Number
7	Date/Time of Message	YYYYMMDDHHMMSS	EHR Record Creation Date/Time
8	Security		
9	Message Type	ORU^R01	Static Value
10	Message Control ID	String	Requisition ID
11	Processing ID	Code	HL7 Mode: P – Production T – Training D – Debug/Testing
12	Version ID	2.7	HL7 Version Number
13-25		Not Supported	

```
MSH|^~\&|System Name^Version Number|Provider Lab Identifier^Provider Lab
Account Number|HL7 Provider Name|Facility Name^EHR Account
Number|YYYYMMDDHHMMSS||ORU^R01|Requisition ID|P|2.7
```

PID – Patient Identification Segment

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

Field #	Field Name	Value (Format)	Notes
0	Record Type	PID	
1	Set ID - Patient ID	1	Static Value
2	Patient ID	String	Patient External Source ID or Patient MRN if the Patient does not have External Source ID
3	Patient Identifier List	String	Patient External Source ID or Patient MRN if the Patient does not have External Source ID
4	Alternate Patient ID	String	Patient MRN

Field #	Field Name	Value (Format)	Notes
5	Patient Name	XPN format	Last Name^First Name^Middle Name
6	Mother's Maiden Name		
7	Date/Time of Birth	YYYYMMDD	
8	Gender	Code	F – Female M – Male U - Unknown
9-10		Not Supported	
11	Patient Address	XAD format	Address 1^Address 2^City^State^Zip
12	County Code		
13	Phone Number - Home	XTN format	Phone Number^^^^^Area/City Code^Local Number^Extension
14-17		Not Supported	
18	Patient Account Number	String	Patient MRN
19-40		Not Supported	

```
PID|1|Patient External Source ID|Patient External Source ID|Patient MRN|Last
Name^First Name^Middle Name||YYYYMMDD|Gender|||Address 1^Address
2^City^State^Zip||Phone Number^^^^^Area/City Code^Local
Number^Extension|||||Patient MRN||||
```

ORC – Common Order Segment

The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested).

The ORC segment will always have at least one OBR segment after it.

Field #	Field Name	Value (Format)	Notes
0	Record Type	ORC	
1	Order Control	RE	Static value (Observations/Performed Service to follow)
2	Placer Order Number	String	Requisition External Source ID or Requisition ID if the Requisition does not have External Source ID
3	Filler Order Number	String	Requisition ID
4-5		Not Supported	
6	Response Flag	D	Static Value
7-8		Not Supported	
9	Date/Time of Transaction	YYYYMMDDHHMMSS	Released Date/Time
10-11		Not Supported	
12	Ordering Provider	XCN format	Requesting Physician NPI Number^Physician Last Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI
13-14		Not Supported	
15	Order Effective Date/Time	YYYYMMDDHHMMSS	Received Date/Time

Field #	Field Name	Value (Format)	Notes
16-20		Not Supported	
21	Ordering Facility Name	XON format	Facility Name^D^^^^^AN^^A^EHR Account Number
22-34		Not Supported	

```
ORC|RE|Requisition External Source ID|Requisition
ID|||D|||YYYYMMDDHHMMSS|||Physician NPI Number^Physician Last Name^Physician
First Name^Physician Middle Name^^^^^^^^^^NPI|||YYYYMMDDHHMMSS||||||Facility
Name^D^^^^^AN^^A^EHR Account Number
```

OBR – Observation Request Segment

The Observation Request (OBR) segment is used to transmit information specific to an order for a diagnostic study or observation, physical exam, or assessment.

The OBR segment will be always sent and may repeat. As part of the associated ORC hierarchy, OBR will always follow ORC segment. Each OBR will have at least one OBX segment associated with it.

Field #	Field Name	Value (Format)	Notes
0	Record Type	OBR	
1	Set ID - OBR	#	Sequence number of the OBR segments within the ORC segment.
2	Placer Order Number	String	Requisition External Source ID or Requisition ID if the Requisition does not have External Source ID
3	Filler Order Number	String	Requisition ID
4	Universal Service Identifier	CWE format	Test Code^Test Description^L or POC^POC Results (Static Value. Header for POC tests) or Base64^Embedded PDF (Static Value. Report file data)
5	Priority	R	Static Value
6	Requested Date/time	YYYYMMDDHHMMSS	Received Date/Time
7	Observation Date/Time	YYYYMMDDHHMMSS	Collection Date/Time
8-13		Not Supported	
14	Specimen Received Date/Time	YYYYMMDDHHMMSS	Received Date/Time
15	Specimen Source	String	Specimen Type Name
16	Ordering Provider	XCN format	Requesting Physician NPI Number^Physician Last Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI
17-21		Not Supported	
22	Date/Time Observations Reported	YYYYMMDDHHMMSS	Report Date/Time

Field #	Field Name	Value (Format)	Notes
23-24		Not Supported	
25	Order Result Status	Code	F - Final results C - Correction to results
26-52		Not Supported	
53	Alternate Placer Order Number	String	Sample Number
54	Parent Order		

```
OBR|1|Requisition External Source ID|Requisition ID|POC^POC
Results|R|YYYYMMDDHHMMSS|YYYYMMDDHHMMSS||||||YYYYMMDDHHMMSS|Specimen Type
Name|Physician NPI^Physician Last Name^Physician First Name^Physician Middle
Name^^^^^^^^^^NPI||||||YYYYMMDDHHMMSS|||Order Result Status|

OBR|2|Requisition External Source ID|Requisition ID|Test Code^Test
Description^L|R|YYYYMMDDHHMMSS|YYYYMMDDHHMMSS|||||||YYYYMMDDHHMMSS|Specimen
Type Name|Physician NPI^Physician Last Name^Physician First Name^Physician
Middle Name^^^^^^^^^^NPI||||||YYYYMMDDHHMMSS|||Order Result
Status|||||||||||||||||||||||||||Sample Number

OBR|3|Requisition External Source ID|Requisition ID|Base64^Embedded
PDF|R||YYYYMMDDHHMMSS|||||||YYYYMMDDHHMMSS|Specimen Type Name|Physician
NPI^Physician Last Name^Physician First Name^Physician Middle
Name^^^^^^^^^^NPI||||||YYYYMMDDHHMMSS|||Order Result Status|
```

SPM – Specimen Segment

The intent of this segment is to describe the characteristics of a specimen.

The SPM segment will be used for HL7 2.5 and newer version only. For older versions, OBR.15 will be used instead. As part of the associated OBR hierarchy, SPM will always follow OBR segment.

Field #	Field Name	Value (Format)	Notes
0	Record Type	SPM	
1	Set ID - OBX	1	Static Value
2	Specimen ID	EIP format	
3	Specimen Parent IDs		
4	Specimen Type	CWE format	Specimen Type Code^Specimen Type Name
5-29		Not Supported	
30	Accession ID	CX format	
31-32		Not Supported	

```
SPM|1|Specimen ID||Specimen Type Code^Specimen Type
Name|||||||||||||||||||||||||Accession ID||
```

OBX – Observation/Results Segment

In the ORU messages, the OBX segment is used to transmit clinical observation/results reporting information.

For the group of tests, which represents a collection of individual measurements, each measurement is conveyed in its own OBX segment. Only reportable tests will be sent.

The OBX segment will be always sent and may repeat. As part of the associated OBR hierarchy, OBX will always follow OBR segment.

Field #	Field Name	Value (Format)	Notes
0	Record Type	OBX	
1	Set ID - OBX	#	Sequence number of the OBX segments within the OBR segment.
2	Value Type	Code	ST – String data NM - Numeric TX – Text Data (when the value length is > 32 characters) ED - Encapsulated data
3	Observation Identifier	CWE format	POC Test Code^POC Test Name^L or Analyte Name^Analyte Name^L^^^ or PDF (Static Value. Report file data)
4	Observation Sub-ID	#	Empty if POC Test result or Sequence number of the OBX segments within the OBR segment if regular Tests or Base64 (Static Value. Report file data)
5	Observation Value	String	Test Result Value or Base64 encoded report file
6	Units of Measure Identifier	String	Test Result Unit
7	Reference Ranges	String	Empty if POC Test result or Reference Range (Low Value - High Value)
8	Interpretation Code	Code	HL7 Interpretation Code of the result flag * see Appendix 5
9-10		Not Supported	
11	Observation Result Status	Code	F - Final results C - Correction to results
12-13		Not Supported	
14	Date/Time of the Observation	YYYYMMDDHHMMSS	Report Date/Time
15	Producer ID	CWE format	POC^Point of Care (Static Value) or CLIA Number^Lab Name

Field #	Field Name	Value (Format)	Notes
16	Responsible Observer	XCN format	Test Performer License Number^Test Performer Last Name^Test Performer First Name
17-22		Not Supported	
23	Performing Organization Name	XON format	Lab Name
24	Performing Organization Address	XAD format	Lab Address 1^Address 2^City^State^Zip
25	Performing Organization Medical Director	XCN format	Lab Director Physicians Code^Lab Director Last Name^Lab Director First Name^^^^Lab Director Degree
26-30		Not Supported	

```
OBX|1|ST|POC Test Code^POC Test Name^L||Test Result Value|Test Result
Unit||HL7 Interpretation Code|||Observation Result
Status|||YYYYMMDDHHMMSS|POC^Point of Care

or

OBX|1|NM|Analyte Name^Analyte Name^L^^^|1|Test Result Value|Test Result
Unit|HL7 Interpretation Code|||Observation Result
Status|||YYYYMMDDHHMMSS|CLIA Number^Lab Name|Test Performer License
Number^Test Performer Last Name^Test Performer First Name|||||||Lab Name|Lab
Address 1^Address 2^City^State^Zip|Lab Director Physicians Code^Lab Director
Last Name^Lab Director First Name^^^^Lab Director Degree

or

OBX|1|ED|PDF|Base64|Base64 encoded report file
```

NTE – Notes and Comments Segment

The NTE segments are commonly used for sending Notes and Comments as well as posting Outcomes.

The description in the message containing an indication of the associated group, defines the meaning of the NTE segments. NTE without the indication will mean the Comment. NTE with "Outcome" indication will contain a certain value, if applicable.

The default maximum length of the text of an NTE record is 75 characters. On request, the maximum length can be set according to the receiving system. Please discuss this matter with the LimitLIS® project manager.

The NTE segment is optional and may repeat. As part of the associated OBX hierarchy, NTE will follow OBX segment.

Field #	Field Name	Value (Format)	Notes
0	Record Type	NTE	
1	Set ID - NTE	#	Sequence number of the NTE segments within the OBX segment.
2	Source of Comment	Code	L - Ancillary (filler) department is source of comment O - Other system is source of comment
3	Comment	String	Comment text or Outcome: value
4	Comment Type	Code	RE - Remark
5-8		Not Supported	

```
NTE|1|O|Comment text|
NTE|2|L|Outcome: CONSISTENT|RE
NTE|3|L|Outcome: INCONSISTENT|RE
```

DFT – Detail Financial Transaction

HL7 DFT_P03 Message Structure

The table below describes the sequential structure of an HL7 DFT message implemented in LimitLIS® system.

Segments with no brackets around it – will be always sent, [] – Optional, {} - May repeat, [{}] - Optional and May repeat.

If the transmission of any segment type will cause a processing problem in the receiving system, please bring this fact to the attention of the LimitLIS® project manager.

The Detail Financial Transaction (DFT) message structure:

MSH	Message Header
PID	Patient Identification
PD1	Patient Additional Demographic
PV1	Patient Visit
{FT1}	Financial Transaction
{DG1}	Diagnosis
GT1	Guarantor
[{IN1}]	Insurance

HL7 DFT_P03 Segment Specifications – HL7 v.2.7

The DFT message describes a financial transaction that is sent to a billing system and is used for patient accounting purposes.

The tables below show the fields that will be sent within each of the segments and the nature of the data each field contains. All fields that have been greyed out will not be sent. Below each table are placed example(s).

If the receiving application requires the use of additional specific fields that are greyed out or not specified in this document, please discuss this matter with the LimitLIS® project manager.

MSH – Message Header Segment

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.

Field #	Field Name	Value (Format)	Notes
0	Record Type	MSH	
1	Field Separator	|	Default Value, but we can support any other separator value
2	Encoding Characters	^~\&	Default Value, but we can support any other values
3	Sending Application	HD format	System Name^Version Number

4	Sending Facility	HD format	Provider Lab Identifier^Provider Lab Account Number
5	Receiving Application	String	HL7 Provider Name
6	Receiving Facility	HD format	Facility Name^Facility Billing Identifier
7	Date/Time of Message	YYYYMMDDHHMMSS	Billing Record Creation Date/Time
8	Security		
9	Message Type	DFT^P03	Static Value
10	Message Control ID	String	Requisition ID
11	Processing ID	Code	HL7 Mode: P – Production T – Training D – Debug/Testing
12	Version ID	2.7	HL7 Version Number
13-25		Not Supported	

```
MSH|^~\&|System Name^Version Number|Provider Lab Identifier^Provider Lab
Account Number|HL7 Provider Name|Facility Name^Facility Billing
Identifier|YYYYMMDDHHMMSS||DFT^P03|Requisition ID|P|2.7
```

PID – Patient Identification Segment

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains patient identifying and demographic information that, for the most part, is not likely to change frequently.

This segment will be always sent.

Field #	Field Name	Value (Format)	Notes
0	Record Type	PID	
1	Set ID - Patient ID	1	Static Value
2	Patient ID	String	Patient External Source ID or Patient MRN if the Patient does not have External Source ID
3	Patient Identifier List	String	Patient External Source ID or Patient MRN if the Patient does not have External Source ID
4	Alternate Patient ID	String	Patient MRN
5	Patient Name	XPN format	Last Name^First Name^Middle Name
6	Mother's Maiden Name		
7	Date/Time of Birth	YYYYMMDD	
8	Gender	Code	F – Female M – Male U - Unknown
9-10		Not Supported	
11	Patient Address	XAD format	Address 1^Address 2^City^State^Zip
12	County Code		

Field #	Field Name	Value (Format)	Notes
13	Phone Number - Home	XTN format	Phone Number^^^^^Area/City Code^Local Number^Extension
14-17		Not Supported	
18	Patient Account Number	String	Patient MRN
19-40		Not Supported	

```
PID|1|Patient External Source ID|Patient External Source ID|Patient MRN|Last
Name^First Name^Middle Name||YYYYMMDD|Gender|||Address 1^Address
2^City^State^Zip||Phone Number^^^^^Area/City Code^Local
Number^Extension|||||Patient MRN||||
```

PD1 – Patient Additional Demographic Segment

The Patient Additional Demographic (PD1) segment contains demographic information that is likely to change about the patient. In the LimitLIS® system, this segment is used to transmit the Patient's Primary Physician information.

This segment will be always sent but may be empty.

Field #	Field Name	Value (Format)	Notes
0	Record Type	PD1	
1-3		Not Supported	
4	Patient Primary Care Provider Name & ID No.	Numeric	Primary Physician NPI (10 digits)
5-22		Not Supported	

```
PD1||||Primary Physician NPI
```

PV1 – Patient Visit Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on an account or visit-specific basis. The default is to send account level data.

This segment will be always sent.

Field #	Field Name	Value (Format)	Notes
0	Record Type	PV1	
1	Set ID - PV1	1	Static Value
2	Patient Class	O	Static Value
3-7		Not Supported	
8	Referring Doctor	XCN format	Requesting Physician NPI Number^Physician Last Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI
9-19		Not Supported	

Field #	Field Name	Value (Format)	Notes
20	Financial Class	Code	Insurance Medicare Facility Patient/Self Pay
21-33		Not Supported	
34	Delete Account Indicator	N	Static Value
35-51		Not Supported	
52	Other Healthcare Provider	XCN format	^Facility Account Manager Last Name^Facility Account Manager First Name^Facility Account Manager Middle Name
53-54		Not Supported	

```
PV1|1|O||||||Physician NPI Number^Physician Last Name^Physician First
Name^Physician Middle
Name^^^^^^^^^^NPI|||||||||||Financial Class|||||||||||||N|||||||||||||||||
^Facility Account Manager Last Name^Facility Account Manager First
Name^Facility Account Manager Middle Name
```

FT1 – Financial Transaction Segment

The FT1 segment contains the data necessary to post charges, payments, adjustments, etc., to patient accounting records.

The FT1 segment is generated only if the Test has at least one CPT code on it.

There are three types of billing depending on configuration:

- Individual tests billing. In this case, there will be separate FT1 segments per each CPT code.
- Drug Class CPT Billing. CPT codes that are associated with a particular drug class will be billed as a class and not individually. Accordingly, the FT1 segment will be generated for each drug class.
- HCPCS G048x codes billing. Implies the grouping by number of unique drug class values. In this case, the FT1 segment will be generated for corresponding group and display HCPCS G048x code.

NOTE: If the test is marked as Non-Reportable or unrelated to a Drug Class, it will be billed as an individual test.

Field #	Field Name	Value (Format)	Notes
0	Record Type	FT1	
1	Set ID – FT1	#	Sequence number
2-3		Not Supported	
4	Transaction Date	YYYYMMDDHHMMSS	Collection Date/Time
5	Transaction Posting Date		
6	Transaction Type	CG	Static Value (Charge)
7	Transaction Code	String	Test Code or

Field #	Field Name	Value (Format)	Notes
			Empty if Drug Class CPT Billing is set or Empty if HCPCS Code G048X Billing is set
8	Transaction Description	String	Test Description or Test Class Name or empty if HCPCS Code G048X Billing is set
9	Transaction Description - Alternate	String	Test Description or Test Class Name or empty if HCPCS Code G048X Billing is set
10	Transaction Quantity	1	Static Value or Test Result Value if Non-Reportable test is billed
11-19		Not Supported	
20	Performed By Code	XCN format	For Non-Reportable tests only: Test Performer License Number^Test Performer Last Name^Test Performer First Name Otherwise empty
21	Ordered By Code	XCN format	Requesting Physician NPI Number^Physician Last Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI
22	Unit Cost		
23	Filter Order Number	String	Sample Number
24	Entered By Code		
25	Procedure Code	String	CPT Code or HCPCS G048x code in CNE format (G048x code^^HCPCS)
26-31		Not Supported	
32	Performing Facility	XON format	Lab Name^D^^^^^PPIN^^^CLIA Number
33	Ordering Facility	XON format	Facility Name^D^^^^^FI^^^Facility Billing Identifier
34-43		Not Supported	

```
FT1|1|||YYYYMMDDHHMMSS||CG|Test Code|Test Description|Test Description|Non-
Reportable Test Result Value|||||||||Test Performer License Number^Test
Performer Last Name^Test Performer First Name|Physician NPI Number^Physician
Last Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI||Sample
Number||CPT Code|||||||Lab Name^D^^^^^PPIN^^^CLIA Number|Facility
Name^D^^^^^FI^^^Facility Billing Identifier|||
```

or

```
FT1|1|||YYYYMMDDHHMMSS||CG|Test Code|Test Description|Test
Description|1|||||||||||Physician NPI Number^Physician Last Name^Physician
First Name^Physician Middle Name^^^^^^^^^^NPI||Sample Number||CPT
```

```
Code|||||||Lab Name^D^^^^^PPIN^^^CLIA Number|Facility
Name^D^^^^^FI^^^Facility Billing Identifier|||

or
FT1|1|||YYYYMMDDHHMMSS||CG||Test Class Name|Test Class
Name|1|||||||||||Physician NPI Number^Physician Last Name^Physician First
Name^Physician Middle Name^^^^^^^^^^NPI||Sample Number||CPT Code|||||||Lab
Name^D^^^^^PPIN^^^CLIA Number|Facility Name^D^^^^^FI^^^Facility Billing
Identifier|||

or

FT1|1|||YYYYMMDDHHMMSS||CG||||1|||||||||||Physician NPI Number^Physician Last
Name^Physician First Name^Physician Middle Name^^^^^^^^^^NPI||Sample
Number||G048x code^^HCPCS|||||||Lab Name^D^^^^^PPIN^^^CLIA Number|Facility
Name^D^^^^^FI^^^Facility Billing Identifier|||
```

DG1 – Diagnosis Segment

The DG1 segment contains patient diagnosis information. Only ICD-10 is currently supported by LimitLIS® system.

This segment will be always sent and may repeat.

Field #	Field Name	Value (Format)	Notes
0	Record Type	DG1	
1	Set ID - DG1	#	Sequence number
2	Diagnosis Coding Method	I10	Static Value
3	Diagnosis Code	CWE format	Diagnosis Code^Diagnosis Description^I10
4-26		Not Supported	

```
DG1|1|I10|Diagnosis Code^Diagnosis Description^I10
```

GT1 – Guarantor Segment

The GT1 segment contains guarantor (e.g., the person or the organization with financial responsibility for payment of a patient account) data for patient and insurance billing applications.

This segment will be always sent.

Field #	Field Name	Value (Format)	Notes
0	Record Type	GT1	
1	Set ID - GT1	1	Static Value
2	Guarantor Number	String	Patient MRN if Financial Class (PV1.20) is "Patient/Self Pay" or Relation to Insured is "Self".

Field #	Field Name	Value (Format)	Notes
			Otherwise empty.
3	Guarantor Name	XPN format	Patient Last Name^Patient First Name^Patient Middle Name or Subscriber Last Name^Subscriber First Name^Subscriber Middle Name or Billing Facility Name
4	Guarantor Spouse Name		
5	Guarantor Address	XAD format	Patient Address 1^Address 2^City^State^Zip or Subscriber Address 1^Address 2^City^State^Zip or Billing Facility Address 1^Address 2^City^State^Zip
6	Guarantor Phone Number	XTN format	Patient Phone Number^^^^^Area/City Code^Local Number^Extension or Empty if Subscriber or Billing Facility Phone Number^^^^^Area/City Code^Local Number^Extension
7	Guarantor Business Phone Number	XTN format	Patient Phone Number^^^^^Area/City Code^Local Number^Extension or Empty if Subscriber or Billing Facility Phone Number^^^^^Area/City Code^Local Number^Extension
8	Guarantor Date of Birth	YYYYMMDD	Patient DOB or Subscriber DOB or Empty if Facility
9	Guarantor Gender	Code	Patient Sex or Subscriber Sex or Empty if Facility F – Female M – Male U – Unknown
10	Guarantor Type	Code	Y – for Person N – for Facility
11	Guarantor Relationship	Code	SEL^Self SPO^Spouse CHD^Child OTH^Other
12-57		Not Supported	

```
GT1|1|Patient MRN|Patient Last Name^Patient First Name^Patient Middle
Name||Patient Address 1^Address 2^City^State^Zip|Patient Phone
Number^^^^^Area/City Code^Local Number^Extension|Patient Phone
Number^^^^^Area/City Code^Local Number^Extension|Patient DOB|Patient
Gender|Y|SEL^Self

or

GT1|1||Subscriber Last Name^Subscriber First Name^Subscriber Middle
Name||Subscriber Address 1^Address 2^City^State^Zip|||Subscriber
DOB|Subscriber Gender|Y|Guarantor Relationship

or

GT1|1||Billing Facility Name||Billing Facility Address 1^Address
2^City^State^Zip|Billing Facility Phone Number^^^^^Area/City Code^Local
Number^Extension|Billing Facility Phone Number^^^^^Area/City Code^Local
Number^Extension|||N|OTH^Other
```

IN1 – Insurance Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.

This segment will be sent only if the Financial Class is an Insurance Company or Medicare. The IN1 segment may repeat. The first IN1 segment will contain the primary insurance.

Field #	Field Name	Value (Format)	Notes
0	Record Type	IN1	
1	Set ID – IN1	#	Sequence number
2	Health Plan ID		
3	Insurance Company ID	String	Insurance Company Payer ID
4	Insurance Company Name	String	Insurance Company Name
5	Insurance Company Address	XAD format	Insurance Company Address 1^Address 2^City^State^Zip
6	Insurance Co Contact Person		
7	Insurance Co Phone Number	XTN format	Insurance Company Phone Number^^^^^Area/City Code^Local Number^Extension
8	Group Number	String	Patient's Insurance Co Group Number
9-15		Not Supported	
16	Name of Insured	XPN format	Subscriber Last Name^Subscriber First Name^Subscriber Middle Name or Patient Last Name^Patient First Name^Patient Middle Name

Field #	Field Name	Value (Format)	Notes
17	Insured's Relationship to Patient	Code	SEL^Self SPO^Spouse CHD^Child OTN^Other
18	Insured's Date of Birth	YYYYMMDD	Subscriber DOB or Patient DOB
19	Insured's Address	XAD format	Subscriber Address 1^Address 2^City^State^Zip or Patient Address 1^Address 2^City^State^Zip
20	Assignment of Benefits	Y	Static Value
21-35		Not Supported	
36	Policy Number	String	Patient's Insurance Co Policy Number
37-42		Not Supported	
43	Insured's Gender	Code	Subscriber Sex or Patient Sex F – Female M – Male U – Unknown
44-55		Not Supported	

```
IN1|1||Insurance Company Payer ID|Insurance Company Name|Insurance Co Address
1^Address 2^City^State^Zip||Insurance Co Phone Number^^^^^Area/City
Code^Local Number^Extension|Patient's Insurance Co Group
Number|||||||Subscriber Last Name^Subscriber First Name^Subscriber Middle
Name|Insured's Relationship to Patient|YYYYMMDD|Subscriber Address 1^Address
2^City^State^Zip|Y|||||||||||||||Patient's Insurance Co Policy
Number|||Subscriber Gender||||||
```

or

```
IN1|1||Insurance Company Payer ID|Insurance Company Name|Insurance Co Address
1^Address 2^City^State^Zip||Insurance Co Phone Number^^^^^Area/City
Code^Local Number^Extension|Patient's Insurance Co Group
Number|||||||Patient Last Name^Patient First Name^Patient Middle
Name|SEL^Self|YYYYMMDD|Patient Address 1^Address
2^City^State^Zip|Y|||||||||||||||Patient's Insurance Co Policy
Number|||Patient Gender||||||
```

ADT – Admit Discharge Transfer

There are 51 different types of ADT messages that are used for various trigger events. The following is the HL7 Data Mapping for the ADT-A04 "Patient registration" outbound Interface that is used in the LimitLIS® system by default. If the receiving application requires the use of other trigger events, please discuss this matter with the LimitLIS® project manager.

HL7 ADT_A04 Message Structure

The table below describes the sequential structure of an HL7 ADT_04 message implemented in LimitLIS® system.

Segments with no brackets around it – will be always sent, [] – Optional, {} - May repeat, [{}] - Optional and May repeat.

If the transmission of any segment type will cause a processing problem in the receiving system, please bring this fact to the attention of the LimitLIS® project manager.

The Admit Discharge Transfer (ADT) message structure:

MSH	Message Header
PID	Patient Identification
PD1	Patient Additional Demographic
PV1	Patient Visit
GT1	Guarantor
[{IN1}]	Insurance

HL7 ADT_A04 Segment Specifications

The ADT message carries patient demographic information synchronized across healthcare systems.

ADT message will be sent when a new patient is enrolled so that the Client system can match the financial transaction to a patient within the system.

The tables below show the fields that will be sent within each of the segments and the nature of the data each field contains. All fields that have been greyed out will not be sent. Below each table are placed example(s).

If the receiving application requires the use of additional specific fields that are greyed out or not specified in this specification, please discuss this matter with the LimitLIS® project manager.

MSH – Message Header Segment

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.

Field #	Field Name	Value (Format)	Notes
0	Record Type	MSH	
1	Field Separator	|	Default Value, but we can support any other separator values
2	Encoding Characters	^~\&	Default Value, but we can support any other values
3	Sending Application	HD format	System Name^Version Number
4	Sending Facility	HD format	Provider Lab Identifier^Provider Lab Account Number
5	Receiving Application	String	HL7 Provider Name
6	Receiving Facility	HD format	Facility Name^Facility Billing Identifier
7	Date/Time of Message	YYYYMMDDHHMMSS	Patient Demographic Record Creation Date/Time
8	Security		
9	Message Type	ADT^A04	Static Value
10	Message Control ID	String	Patient MRN
11	Processing ID	Code	HL7 Mode: P – Production T – Training D – Debug/Testing
12	Version ID	2.7	HL7 Version Number
13-25		Not Supported	

```
MSH|^~\&|System Name^Version Number|Provider Lab Identifier^Provider Lab
Account Number|HL7 Provider Name|Facility Name^Facility Billing
Identifier|YYYYMMDDHHMMSS||ADT^A04|Patient MRN|P|2.7
```

PID – Patient Identification Segment

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains patient identifying and demographic information that, for the most part, is not likely to change frequently.

This segment will be always sent.

Field #	Field Name	Value (Format)	Notes
0	Record Type	PID	
1	Set ID - Patient ID	1	Static Value
2	Patient ID	String	Patient External Source ID or Patient MRN if the Patient does not have External Source ID
3	Patient Identifier List	String	Patient External Source ID or

Field #	Field Name	Value (Format)	Notes
			Patient MRN if the Patient does not have External Source ID
4	Alternate Patient ID	String	Patient MRN
5	Patient Name	XPN format	Last Name^First Name^Middle Name
6	Mother's Maiden Name		
7	Date/Time of Birth	YYYYMMDD	
8	Gender	Code	F – Female M – Male U - Unknown
9-10		Not Supported	
11	Patient Address	XAD format	Address 1^Address 2^City^State^Zip
12	County Code		
13	Phone Number - Home	XTN format	Phone Number^^^^^Area/City Code^Local Number^Extension
14-17		Not Supported	
18	Patient Account Number	String	Patient MRN
19-40		Not Supported	

```
PID|1|Patient External Source ID|Patient External Source ID|Patient MRN|Last Name^First Name^Middle Name||YYYYMMDD|Gender|||Address 1^Address 2^City^State^Zip||Phone Number^^^^^Area/City Code^Local Number^Extension|||||Patient MRN||||
```

PD1 – Patient Additional Demographic Segment

The Patient Additional Demographic segment contains demographic information that is likely to change about the patient. In the LimitLIS® system, this segment is used to transmit the Patient's Primary Physician information.

This segment will be always sent but may be empty.

Field #	Field Name	Value (Format)	Notes
0	Record Type	PD1	
1-3		Not Supported	
4	Patient Primary Care Provider Name & ID No.	Numeric	Primary Physician NPI (10 digits)
5-22		Not Supported	

```
PD1||||Primary Physician NPI
```

PV1 – Patient Visit Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on an account or visit-specific basis. The default is to send account level data.

This segment will be always sent.

Field #	Field Name	Value (Format)	Notes
0	Record Type	PV1	
1	Set ID - PV1	1	Static Value
2	Patient Class	O	Static Value
3-19		Not Supported	
20	Financial Class	Code	Insurance Medicare Facility Patient/Self Pay
21-33		Not Supported	
34	Delete Account Indicator	N	Static Value
35-51		Not Supported	
52	Other Healthcare Provider	XCN format	^Facility Account Manager Last Name^Facility Account Manager First Name^Facility Account Manager Middle Name

```
PV1|1|O|||||||||||||||||||Financial Class||||||||||||||N|||||||||||||||||^Facility Account Manager Last Name^Facility Account Manager First Name^Facility Account Manager Middle Name
```

GT1 – Guarantor Segment

The GT1 segment contains guarantor (e.g., the person or the organization with financial responsibility for payment of a patient account) data for patient and insurance billing applications.

This segment will be always sent.

Field #	Field Name	Value (Format)	Notes
0	Record Type	GT1	
1	Set ID - GT1	1	Static Value
2	Guarantor Number	String	Patient MRN if Financial Class is “Patient/Self Pay” or Relation to Insured is “Self”. Otherwise empty.
3	Guarantor Name	XPN format	Patient Last Name^Patient First Name^Patient Middle Name or Subscriber Last Name^Subscriber First Name^Subscriber Middle Name or Billing Facility Name
4	Guarantor Spouse Name		
5	Guarantor Address	XAD format	Patient Address 1^Address 2^City^State^Zip or Subscriber Address 1^Address 2^City^State^Zip or

Field #	Field Name	Value (Format)	Notes
			Billing Facility Address 1^Address 2^City^State^Zip
6	Guarantor Phone Number	XTN format	Patient Phone Number^^^^^Area/City Code^Local Number^Extension or Empty if Subscriber or Billing Facility Phone Number^^^^^Area/City Code^Local Number^Extension
7	Guarantor Business Phone Number	XTN format	Patient Phone Number^^^^^Area/City Code^Local Number^Extension or Empty if Subscriber or Billing Facility Phone Number^^^^^Area/City Code^Local Number^Extension
8	Guarantor Date of Birth	YYYYMMDD	Patient DOB or Subscriber DOB or Empty if Facility
9	Guarantor Gender	Code	Patient Sex or Subscriber Sex or Empty if Facility F – Female M – Male U – Unknown
10	Guarantor Type	Code	Y – for Person N – for Facility
11	Guarantor Relationship	Code	SEL^Self SPO^Spouse CHD^Child OTH^Other

```
GT1|1|Patient MRN|Patient Last Name^Patient First Name^Patient Middle
Name||Patient Address 1^Address 2^City^State^Zip|Patient Phone
Number^^^^^Area/City Code^Local Number^Extension|Patient Phone
Number^^^^^Area/City Code^Local Number^Extension|Patient DOB|Patient
Gender|Y|SEL^Self

or

GT1|1||Subscriber Last Name^Subscriber First Name^Subscriber Middle
Name||Subscriber Address 1^Address 2^City^State^Zip|||Subscriber
DOB|Subscriber Gender|Y|Guarantor Relationship

or
```

```
GT1|1||Billing Facility Name||Billing Facility Address 1^Address
2^City^State^Zip|Billing Facility Phone Number^^^^^Area/City Code^Local
Number^Extension|Billing Facility Phone Number^^^^^Area/City Code^Local
Number^Extension|||N|OTH^Other
```

IN1 – Insurance Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.

This segment will be sent only if the Financial Class is an Insurance Company or Medicare. The IN1 segment may repeat.

Field #	Field Name	Value (Format)	Notes
0	Record Type	IN1	
1	Set ID – IN1	#	Sequence number
2	Health Plan ID		
3	Insurance Company ID	String	Insurance Company Payer ID
4	Insurance Company Name	String	Insurance Company Name
5	Insurance Company Address	XAD format	Insurance Company Address 1^Address 2^City^State^Zip
6	Insurance Co Contact Person		
7	Insurance Co Phone Number	XTN format	Insurance Company Phone Number^^^^^Area/City Code^Local Number^Extension
8	Group Number	String	Patient's Insurance Co Group Number
9-15		Not Supported	
16	Name of Insured	XPN format	Subscriber Last Name^Subscriber First Name^Subscriber Middle Name or Patient Last Name^Patient First Name^Patient Middle Name
17	Insured's Relationship to Patient	Code	SEL^Self SPO^Spouse CHD^Child OTN^Other
18	Insured's Date of Birth	YYYYMMDD	Subscriber DOB or Patient DOB
19	Insured's Address	XAD format	Subscriber Address 1^Address 2^City^State^Zip or Patient Address 1^Address 2^City^State^Zip
20	Assignment of Benefits	Y	Static Value
21-35		Not Supported	
36	Policy Number	String	Patient's Insurance Co Policy Number
37-42		Not Supported	
43	Insured's Gender	Code	Subscriber Sex

Field #	Field Name	Value (Format)	Notes
			or Patient Sex F – Female M – Male U – Unknown
44-55		Not Supported	

```
IN1|1||Insurance Company Payer ID|Insurance Company Name|Insurance Co Address
1^Address 2^City^State^Zip||Insurance Co Phone Number^^^^^Area/City
Code^Local Number^Extension|Patient's Insurance Co Group
Number|||||||Subscriber Last Name^Subscriber First Name^Subscriber Middle
Name|Insured's Relationship to Patient|YYYYMMDD|Subscriber Address 1^Address
2^City^State^Zip|Y|||||||||||||||Patient's Insurance Co Policy
Number||||Subscriber Gender||||||
```

or

```
IN1|1||Insurance Company Payer ID|Insurance Company Name|Insurance Co Address
1^Address 2^City^State^Zip||Insurance Co Phone Number^^^^^Area/City
Code^Local Number^Extension|Patient's Insurance Co Group
Number|||||||Patient Last Name^Patient First Name^Patient Middle
Name|SEL^Self|YYYYMMDD|Patient Address 1^Address
2^City^State^Zip|Y|||||||||||||||Patient's Insurance Co Policy
Number||||Patient Gender||||||
```

APPENDICES

Appendix 1 – ORM - Order Message Examples

Financial Class is Insurance Company or Medicare. GT1 segment contains Subscriber information.

```
MSH|^~\&|Generick|OK Facility|QA LAB Facility|QA LAB
Facility|201708031200||ORM^O01|OK00000029|P|2.7
PID|1||999999990||Bourne^Jason^Middle||19701008|M|||1414 V Street NW apt
552^^Cambridge^SH^20501||3012224444
PV1|1|O||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||||||||||||Insurance|||||||
||||||N|||||OK Facility
IN1|1||3232|Test32 Allied Benefits Systems Inc|777 17th St
SW^^Washington^DC^21557||8044041236|Gr4546|||||||Bourne^Amy^Middle|CHD^Child
|||||||||||||||||||54659|||||||
GT1|1||Bourne^Amy^Middle||555 west St apt
699^^Miami^Florida^25888|||20170501|F|Y|CHD^Child
ORC|NW|OK00000029|||||||||1215185871^Weltz^Carla^^^^^^^^^^NPI
OBR|1|OK00000029||22^Oxycodone|R||201709061157|||||||Urine|1215185871^Weltz^
Carla^^^^^^^^^^NPI
SPM|1|170912000318||UR^Urine|||||||||||||||||||||||||170912000318
OBR|2|OK00000029||8^Opiates-
Opioids|R||201708041157|||||||Urine|1215185871^Weltz^Carla^^^^^^^^^^NPI
SPM|1|170912000317||UR^Urine|||||||||||||||||||||||||170912000317
NTE|1|P|Medications Oxycodone,Percocet
NTE|2|P|Medical Necessity Patient Jason Bourne, age 46 is diagnosed with
Typhoid arthritis
NTE|3|P|Comments The Patient has antibiotic allergy reactions
DG1|1||A0104^Typhoid arthritis
DG1|2||A009^Cholera, unspecified
OBX|1|ST|UOPIPOC^Opiates||P
OBX|2|ST|UMTDNPOC^Methadone||N
```

Financial Class is Insurance Company or Medicare. The GT1 segment is not used. The Subscriber information is in the IN1 segment.

```
MSH|^~\&|Generick|OK Facility|QA LAB Facility|QA LAB
Facility|201708031200||ORM^O01|OK00000029|P|2.7
PID|1||999999990||Bourne^Jason^Middle||19701008|M|||1414 V Street NW apt
552^^Cambridge^SH^20501||3012224444
PV1|1|O||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||||||||||||Insurance|||||||
||||||N|||||OK Facility
```

```
IN1|1||20|OK Allied Benefits Systems Inc|777 17th St
SW^^Washington^DC^21557||8044041236|Gr4546|||||||Bourne^Amy^Middle|CHD^Child
|20170501|5551 west St 699^^Miami^Florida^25888|||||||||||||||||54659|||||||F
ORC|NW|OK00000029|||||||||1215185871^Weltz^Carla^^^^^^^^^^NPI
OBR|1|OK00000029||22^Oxycodone|R||201709061157|||||||Urine|1215185871^Weltz^
Carla^^^^^^^^^^NPI
SPM|1|170912000318||UR^Urine|||||||||||||||||||||||||170912000318
OBR|2|OK00000029||8^Opiates-
Opioids|R||201708041157|||||||Urine|1215185871^Weltz^Carla^^^^^^^^^^NPI
SPM|1|170912000317||UR^Urine|||||||||||||||||||||||||170912000317
NTE|1|P|Medications Oxycodone,Percocet
NTE|2|P|Medical Necessity Patient Jason Bourne, age 46 is diagnosed with
Typhoid arthritis
NTE|3|P|Comments The Patient has antibiotic allergy reactions
DG1|1||A0104^Typhoid arthritis
DG1|2||A009^Cholera, unspecified
OBX|1|ST|UOPIPOC^Opiates||P
OBX|2|ST|UMTDNPOC^Methadone||N
```

Financial Class is Insurance Company or Medicare. The Guarantor/Relation to Insured is Patient.

```
MSH|^~\&|Generick|OK Facility|QA LAB Facility|QA LAB
Facility|201708031200||ORM^O01|OK00000029|P|2.7
PID|1||999999990||Bourne^Jason^Middle||19701008|M|||1414 V Street NW apt
552^^Cambridge^SH^20501||3012224444
PV1|1|O||||||1215185871^Weltz^Carla^^^^^^^^^^NPI|||||||||||Insurance|||||||
||||||N|||||OK Facility
IN1|1||20|OK Allied Benefits Systems Inc|777 17th St
SW^^Washington^DC^21557||8044041236|Gr4546|||||||Bourne^Jason^Middle|SEL^Sel
f|||||||||||||||||||54659|||||||
ORC|NW|OK00000029|||||||||1215185871^Weltz^Carla^^^^^^^^^^NPI
OBR|1|OK00000029||22^Oxycodone|R||201709061157|||||||Urine|1215185871^Weltz^
Carla^^^^^^^^^^NPI
SPM|1|170912000318||UR^Urine|||||||||||||||||||||||||170912000318
OBR|2|OK00000029||8^Opiates-
Opioids|R||201708041157|||||||Urine|1215185871^Weltz^Carla^^^^^^^^^^NPI
SPM|1|170912000317||UR^Urine|||||||||||||||||||||||||170912000317
NTE|1|P|Medications Oxycodone,Percocet
NTE|2|P|Medical Necessity Patient Jason Bourne, age 46 is diagnosed with
Typhoid arthritis
NTE|3|P|Comments The Patient has antibiotic allergy reactions
DG1|1||A0104^Typhoid arthritis
DG1|2||A009^Cholera, unspecified
OBX|1|ST|UOPIPOC^Opiates||P
OBX|2|ST|UMTDNPOC^Methadone||N
```

Financial Class is Facility.

```
MSH|^~\&|Generick|OK Facility|QA LAB Facility|QA LAB
Facility|201708031200||ORM^O01|OK00000029|P|2.7
PID|1||999999990||Bourne^Jason^Middle||19701008|M|||1414 V Street NW apt
552^^Cambridge^SH^20501||3012224444
PV1|1|O||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||||||||||||Facility|||||||||
|||||N|||||OK Facility
GT1|1||Bee Well Family HC||1220 15th St NW^^Washington^DC^21458|918-208-
7497|918-208-7497|||N|OTH^Other
ORC|NW|OK00000029|||||||||||1215185871^Weltz^Carla^^^^^^^^^^NPI
OBR|1|OK00000029||22^Oxycodone|R||201709061157|||||||Urine|1215185871^Weltz^
Carla^^^^^^^^^^NPI
SPM|1|170912000318||UR^Urine|||||||||||||||||||||||||||170912000318
OBR|2|OK00000029||8^Opiates-
Opioids|R||201708041157|||||||Urine|1215185871^Weltz^Carla^^^^^^^^^^NPI
SPM|1|170912000317||UR^Urine|||||||||||||||||||||||||||170912000317
NTE|1|P|Medications Oxycodone,Percocet
NTE|2|P|Medical Necessity Patient Jason Bourne, age 46 is diagnosed with
Typhoid arthritis
NTE|3|P|Comments The Patient has antibiotic allergy reactions
DG1|1||A0104^Typhoid arthritis
DG1|2||A009^Cholera, unspecified
OBX|1|ST|UOPIPOC^Opiates||P
OBX|2|ST|UMTDNPOC^Methadone||N
```

Financial Class is Patient/Self Pay.

```
MSH|^~\&|Generick|OK Facility|QA LAB Facility|QA LAB
Facility|201708031200||ORM^O01|OK00000029|P|2.7
PID|1||999999990||Bourne^Jason^Middle||19701008|M|||1414 V Street NW apt
552^^Cambridge^SH^20501||3012224444
PV1|1|O||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||||||||||||Patient/Self
Pay|||||||||||||N|||||OK Facility
ORC|NW|OK00000029|||||||||||1215185871^Weltz^Carla^^^^^^^^^^NPI
OBR|1|OK00000029||22^Oxycodone|R||201709061157|||||||Urine|1215185871^Weltz^
Carla^^^^^^^^^^NPI
SPM|1|170912000318||UR^Urine|||||||||||||||||||||||||||170912000318
OBR|2|OK00000029||8^Opiates-
Opioids|R||201708041157|||||||Urine|1215185871^Weltz^Carla^^^^^^^^^^NPI
SPM|1|170912000317||UR^Urine|||||||||||||||||||||||||||170912000317
NTE|1|P|Medications Oxycodone,Percocet
NTE|2|P|Medical Necessity Patient Jason Bourne, age 46 is diagnosed with
Typhoid arthritis
NTE|3|P|Comments The Patient has antibiotic allergy reactions
DG1|1||A0104^Typhoid arthritis
DG1|2||A009^Cholera, unspecified
OBX|1|ST|UOPIPOC^Opiates||P
OBX|2|ST|UMTDNPOC^Methadone||N
```

Appendix 2 – ORU - Result Message Example

```
MSH|^~\&|LimitLIS.cloud^3|QA LAB Facility^32323232|Generic|OK
Facility^33333|20170919143511||ORU^R01|R00000453|P|2.7
PID|1|999999990|999999990|3333333339|Bourne^Jason^Middle||19701008|M|||1414 V
Street NW apt 552^^Cambridge^SH^20501||3012224444^^^^^301^222-
4444^|||||3333333339||||
ORC|RE|OK00000031|R00000453|||D|||20170919143400|||1215185871^Weltz^Carla^^^^
^^^^^^NPI|||20170919142200||||||OK Facility^D^^^^^AN^^A^33333
OBR|1|OK00000031|R00000453|POC^POC
Results|R|20170919142200|20170906115700|||||||20170919142200|Blood,Urine|1215
185871^Weltz^Carla^^^^^^^^^^NPI||||||20170919143459|||F|
OBX|1|ST|UBUPPOC^Buprenorphine^L||Not
Tested|ng/mL||N|||F|||20170919143459|POC^Point of Care
OBX|2|ST|UMTDNPOC^Methadone^L||Negative|ng/mL||N|||F|||20170919143459|POC^Poi
nt of Care
OBX|3|ST|UOPIPOC^Opiates^L||Positive|ng/mL||A|||F|||20170919143459|POC^Point
of Care
OBR|2|OK00000031|R00000453|24010^Clarity^L|R|20170919142200|20170906115700|||
||||20170919142200|Urine|1215185871^Weltz^Carla^^^^^^^^^^NPI||||||20170919143
459|||F|||||||||||||||||||||||||||170919000335
OBX|1|NM|24010 Clarity^24010 Clarity^L^^^|1|2550|ng/dL|55.0 -
2000.0|HH|||F|||20170919143459|CLIA32^RURO Inc.|111^Titova^Oksana|||||||RURO
Inc.|321 Ballenger Center Drive^^Frederick^MD^21703|MD^Tebow^Tim^^^^Ph.D
NTE|1|O|TR comment1|
OBR|3|OK00000031|R00000453|8^Opiates-
Opioids^L|R|20170919142200|20170906115700|||||||20170919142200|Urine|12151858
71^Weltz^Carla^^^^^^^^^^NPI||||||20170919143459|||F|||||||||||||||||||||||||
||170919000335
OBX|1|ST|Noroxycodone^Noroxycodone^L^^^|1|>2500.0|ng/dL|37.5|POS|||F|||201709
19143459|CLIA32^RURO Inc.|111^Titova^Oksana|||||||RURO Inc.|321 Ballenger
Center Drive^^Frederick^MD^21703|MD^Tebow^Tim^^^^Ph.D
NTE|1|O|TR comment2|
NTE|2|L|Outcome: CONSISTENT|RE
OBX|2|ST|Oxycodone^Oxycodone^L^^^|2|<37.5|ng/dL|37.5|NEG|||F|||20170919143459
|CLIA32^RURO Inc.|111^Titova^Oksana|||||||RURO Inc.|321 Ballenger Center
Drive^^Frederick^MD^21703|MD^Tebow^Tim^^^^Ph.D
NTE|1|O|TR comment3|
NTE|2|L|Outcome: INCONSISTENT|RE
OBX|3|NM|Oxymorphone^Oxymorphone^L^^^|3|4500|ng/dL|75.5|POS|||F|||20170919143
459|CLIA32^RURO Inc.|111^Titova^Oksana|||||||RURO Inc.|321 Ballenger Center
Drive^^Frederick^MD^21703|MD^Tebow^Tim^^^^Ph.D
NTE|1|O|TR comment4|
NTE|2|L|Outcome: CONSISTENT|RE
OBR|4|OK00000031|R00000453|5100^Color^L|R|20170919142200|20170906115700||||||
|20170919142200|Urine|1215185871^Weltz^Carla^^^^^^^^^^NPI||||||20170919143459
|||F|||||||||||||||||||||||||||170919000335
```

```
OBX|1|ST|5100 Color^5100
Color^L^^^|1|Detected|||DET|||F|||20170919143459|CLIA32^RURO
Inc.|111^Titova^Oksana|||||||RURO Inc.|321 Ballenger Center
Drive^^Frederick^MD^21703|MD^Tebow^Tim^^^^Ph.D
NTE|1|O|TR comment-qualitative|
OBR|5|OK00000031|R00000453|5135^Blood^L|R|20170919142200|20170906115700||||||
|20170919142200|Blood|1215185871^Weltz^Carla^^^^^^^^^^NPI|||||||20170919143459
|||F|||||||||||||||||||||||||||170919000334
OBX|1|NM|5150 Clarity^5150 Clarity^L^^^|1|0.12|g/mL|0.254 -
0.98|L|||F|||20170919143459|CLIA32^RURO Inc.|111^Titova^Oksana|||||||RURO
Inc.|321 Ballenger Center Drive^^Frederick^MD^21703|MD^Tebow^Tim^^^^Ph.D
NTE|1|O|comment|
OBR|6|OK00000031|R00000453|Base64^Embedded
PDF|R||20170906115700|||||||20170919142200|Blood,Urine|1215185871^Weltz^Carla
^^^^^^^^^^NPI|||||||20170919143459|||F|
OBX|1|ED|PDF|Base64|^PDFReport^PDF^Base64^JVBERi0xLjQKMSAwIG9iago8PAovVGl0bGU
gKP7/AFQAZQBzAHQAIABSAGUAcwB1AGwAdABzKQovUHJvZHVjZXIgKHdraHRtbHRvcGRmKQovQ
```

Appendix 3 – DTF - Detail Financial Transaction

Individual tests billing

- The DFT message contains Individual tests and Non-Reportable test.
- Financial Class is Insurance Company or Medicare, Guarantor is a Subscriber.

```
MSH|^~\&|LimitLIS.cloud^3|QA LAB Facility^32323232|Generic|OK
Facility^5555511113333|20170920133158||DFT^P03|R00000455|P|2.7
PID|1|999999990|999999990|3333333339|Bourne^Jason^Middle||19701008|M|||1414 V
Street NW apt 552^^Cambridge^SH^20501||3012224444^^^^^301^222-
4444^|||||3333333339||||
PD1||||1922037001
PV1|1|O||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||||||||||||Insurance|||||||
||||||N|||||||||||||||||^^oksana^
FT1|1|||20170919013000||CG|5135|Blood|Blood|1|||||||||||1215185871^Weltz^Carl
a^^^^^^^^^^NPI||170920000338||2546|||||||RURO Inc.^D^^^^^PPIN^^^CLIA32|OK
Facility^D^^^^^FI^^^5555511113333|||
FT1|2|||20170919013000||CG|1112|NonOrderTest|NonOrderTest|1|||||||||||1215185
871^Weltz^Carla^^^^^^^^^^NPI||170920000339||1214|||||||RURO
Inc.^D^^^^^PPIN^^^CLIA32|OK Facility^D^^^^^FI^^^5555511113333|||
FT1|3|||20170919013000||CG|1|Amphetamines|Amphetamines|1|||||||||||1215185871
^Weltz^Carla^^^^^^^^^^NPI||170920000339||2233|||||||RURO
Inc.^D^^^^^PPIN^^^CLIA32|OK Facility^D^^^^^FI^^^5555511113333|||
FT1|4|||20170919013000||CG|1|Amphetamines|Amphetamines|1|||||||||||1215185871
^Weltz^Carla^^^^^^^^^^NPI||170920000339||3565|||||||RURO
Inc.^D^^^^^PPIN^^^CLIA32|OK Facility^D^^^^^FI^^^5555511113333|||
FT1|5|||20170919013000||CG|1|Amphetamines|Amphetamines|1|||||||||||1215185871
^Weltz^Carla^^^^^^^^^^NPI||170920000339||112|||||||RURO
Inc.^D^^^^^PPIN^^^CLIA32|OK Facility^D^^^^^FI^^^5555511113333|||
FT1|6|||20170919013000||CG|1111|NonRepTest|NonRepTest|119|||||||||111^Titova
^Oksana|1215185871^Weltz^Carla^^^^^^^^^^NPI||170920000339||1213|||||||RURO
Inc.^D^^^^^PPIN^^^CLIA32|OK Facility^D^^^^^FI^^^5555511113333|||
FT1|7|||20170919013000||CG|8|Opiates-Opioids|Opiates-
Opioids|1|||||||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||170920000339||1234||
|||||RURO Inc.^D^^^^^PPIN^^^CLIA32|OK Facility^D^^^^^FI^^^5555511113333|||
DG1|1|I10|A00.9^Cholera, unspecified^I10
DG1|2|I10|A01.04^Typhoid arthritis^I10
GT1|1||Bourne^Amy^Middle||555 west St apt
699^^Miami^FL^25888|||20170501|F|Y|CHD^Child
IN1|1||20|OK Allied Benefits Systems Inc|777 17th St
SW^^Washington^DC^21557||8044041236^^^^^804^404-
1236^|Gr4546|||||||Bourne^Amy^Middle|CHD^Child|20170501|555 west St apt
699^^Miami^FL^25888|Y|||||||||||||||||54659|||||||F||||||
IN1|2||3232|Test32 Allied Benefits Systems Inc|777 17th St
SW^^Washington^DC^21557||8044041236^^^^^804^404-
1236^|Gr22|||||||Bourne^Amy^Middle|OTH^Other|20170501|555 west St apt
```

```
699^^Miami^FL^25888|Y|||||||||||||||Pol222|||||||F||||||
IN1|3||INS1805|Advanced Data Solutions
(NRT/58202)||||Gr33|||||||Bourne^Amy^Middle|OTH^Other|20170501|555 west St
apt 699^^Miami^FL^25888|Y|||||||||||||||Pol333|||||||F||||||
```

Drug Class CPT Billing

- Financial Class is Facility.

```
MSH|^~\&|LimitLIS.cloud^3|QA LAB Facility^32323232|Generic|OK
Facility^5555511113333|20170920135452||DFT^P03|R00000457|P|2.7
PID|1|999999990|999999990|3333333339|Bourne^Jason^Middle||19701008|M|||1414 V
Street NW apt 552^^Cambridge^SH^20501||3012224444^^^^^301^222-
4444^|||||3333333339||||
PD1||||
PV1|1|O||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||||||||||||Facility||||||||
|||||N|||||||||||||||||||^^oksana^
FT1|1|||20170919004500||CG||Methadone|Methadone|1|||||||||||1215185871^Weltz^
Carla^^^^^^^^^^NPI||170920000341||80358|||||||RURO
Inc.^D^^^^^PPIN^^^CLIA32|OK Facility^D^^^^^FI^^^5555511113333|||
FT1|2|||20170919004500||CG||Stimulants, Synthetic|Stimulants,
Synthetic|1|||||||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||170920000341||8037
1|||||||RURO Inc.^D^^^^^PPIN^^^CLIA32|OK Facility^D^^^^^FI^^^5555511113333|||
DG1|1|I10|A00.9^Cholera, unspecified^I10
GT1|1||Bee Well Family HC||1220 15th St NW^^Washington^DC^21458|918-208-
7497^^^^^918^208-7497^|918-208-7497^^^^^918^208-7497^|||N|OTH^Other
```

HCPCS G048x codes billing

- Financial Class is Insurance Company or Medicare, Guarantor is the Patient.

```
MSH|^~\&|LimitLIS.cloud^3|QA LAB Facility^32323232|Generic|OK
Facility^5555511113333|20170920140050||DFT^P03|R00000458|P|2.7
PID|1|999999990|999999990|3333333339|Bourne^Jason^Middle||19701008|M|||1414 V
Street NW apt 552^^Cambridge^SH^20501||3012224444^^^^^301^222-
4444^|||||3333333339||||
PD1||||1922037001
PV1|1|O||||||1215185871^Weltz^Carla^^^^^^^^^^NPI||||||||||||Insurance|||||||
||||||N|||||||||||||||||||^^oksana^
FT1|1|||20170919010000||CG||||1|||||||||||1215185871^Weltz^Carla^^^^^^^^^^NPI
||170920000342||G0481^^HCPCS|||||||RURO Inc.^D^^^^^PPIN^^^CLIA32|OK
Facility^D^^^^^FI^^^5555511113333|||
DG1|1|I10|A00.9^Cholera, unspecified^I10
GT1|1|3333333339|Bourne^Jason^Middle||1414 V Street NW apt
552^^Cambridge^SH^20501|3012224444^^^^^301^222-4444^|3012224444^^^^^301^222-
4444^|19701008|M|Y|SEL^Self
IN1|1||20|OK Allied Benefits Systems Inc|777 17th St
```

```
SW^^Washington^DC^21557||8044041236^^^^^804^404-
1236^|Gr4546|||||||Bourne^Jason^Middle|SEL^Self|19701008|1414 V Street NW
apt 552^^Cambridge^SH^20501|Y||||||||||||||||54659|||||||M||||||
```

Appendix 4 – ADT - Admit Discharge Transfer

Financial Class is Insurance Company or Medicare, Guarantor is a Subscriber.

```
MSH|^~\&|LimitLIS.cloud^3|QA LAB Facility^32323232|Generic|OK
Facility^5555511113333|20170921104933||ADT^A04|3333333339|P|2.7
PID|1|999999990|999999990|3333333339|Bourne^Jason^Middle||19701008|M|||1414 V
Street NW apt 552^^Cambridge^SH^20501||3012224444^^^^^301^222-
4444^|||||3333333339||||
PD1||||1922037001
PV1|1|O|||||||||||||||||Insurance||||||||||||N|||||||||||||||||^^oksana^
GT1|1||Bourne^Amy^Middle||555 west St apt
699^^Miami^FL^25888|||20170501|F|Y|CHD^Child
IN1|1||20|OK Allied Benefits Systems Inc|777 17th St
SW^^Washington^DC^21557||8044041236^^^^^804^404-
1236^|Gr4546|||||||Bourne^Amy^Middle|CHD^Child|20170501|555 west St apt
699^^Miami^FL^25888|Y|||||||||||||||54659|||||||F||||||
IN1|2||3232|Test32 Allied Benefits Systems Inc|777 17th St
SW^^Washington^DC^21557||8044041236^^^^^804^404-
1236^|Gr222|||||||Bourne^Amy^Middle|OTH^Other|20170501|555 west St apt
699^^Miami^FL^25888|Y|||||||||||||||Pol222|||||||F||||||
IN1|3||1231tt|New Insurance Co OKS|4445 White St 98
NW^^Baltimore^MD^21493||12132146545^^^^^213^214-
6545^|Gr333|||||||Bourne^Amy^Middle|OTH^Other|20170501|555 west St apt
699^^Miami^FL^25888|Y|||||||||||||||Pol333|||||||F||||||
```

Financial Class is Insurance Company or Medicare, Guarantor is the Patient

```
MSH|^~\&|LimitLIS.cloud^3|QA LAB Facility^32323232|Generic|OK
Facility^5555511113333|20170921114238||ADT^A04|3333333339|P|2.7
PID|1|999999990|999999990|3333333339|Bourne^Jason^Middle||19701008|M|||1414 V
Street NW apt 552^^Cambridge^SH^20501||3012224444^^^^^301^222-
4444^|||||3333333339||||
PD1||||1922037001
PV1|1|O|||||||||||||||||Insurance||||||||||||N|||||||||||||||||^^oksana^
GT1|1|3333333339|Bourne^Jason^Middle||1414 V Street NW apt
552^^Cambridge^SH^20501|3012224444^^^^^301^222-4444^|3012224444^^^^^301^222-
4444^|19701008|M|Y|SEL^Self
IN1|1||20|OK Allied Benefits Systems Inc|777 17th St
SW^^Washington^DC^21557||8044041236^^^^^804^404-
1236^|Gr4546|||||||Bourne^Jason^Middle|SEL^Self|19701008|1414 V Street NW
apt 552^^Cambridge^SH^20501|Y|||||||||||||||54659|||||||M||||||
```

Financial Class is Facility

```
MSH|^~\&|LimitLIS.cloud^3|QA LAB Facility^32323232|Generic|OK
Facility^5555511113333|20170921114328||ADT^A04|3333333339|P|2.7
PID|1|999999990|999999990|3333333339|Bourne^Jason^Middle||19701008|M|||1414 V
Street NW apt 552^^Cambridge^SH^20501||3012224444^^^^^301^222-
4444^|||||3333333339||||
PD1||||1922037001
PV1|1|O|||||||||||||||||Facility|||||||||||||N|||||||||||||||||^^oksana^
GT1|1||Bee Well Family HC||1220 15th St NW^^Washington^DC^21458|918-208-
7497^^^^^918^208-7497^|918-208-7497^^^^^918^208-7497^|||N|OTH^Other
```

Financial Class is Patient/Self Pay.

```
MSH|^~\&|LimitLIS.cloud^3|QA LAB Facility^32323232|Generic|OK
Facility^5555511113333|20170921114402||ADT^A04|3333333339|P|2.7
PID|1|999999990|999999990|3333333339|Bourne^Jason^Middle||19701008|M|||1414 V
Street NW apt 552^^Cambridge^SH^20501||3012224444^^^^^301^222-
4444^|||||3333333339||||
PD1||||1922037001
PV1|1|O|||||||||||||||||Patient/Self
Pay|||||||||||||N|||||||||||||||^^oksana^
GT1|1|3333333339|Bourne^Jason^Middle||1414 V Street NW apt
552^^Cambridge^SH^20501|3012224444^^^^^301^222-4444^|3012224444^^^^^301^222-
4444^|19701008|M|Y|SEL^Self
```

Appendix 5 – HL7 Interpretation Codes

The Table below represents a list of standard HL7 Interpretation Codes of the result flags for HL7 version **2.7**.

Value	Description
L	Low
H	High
LU	Very low
HU	Very high
LL	Critically low
HH	Critically high
<	Off scale low
>	Off scale high
N	Normal
A	Abnormal
AA	Critically abnormal
null	No range defined, or normal ranges don't apply
U	Significant change up
D	Significant change down
B	Better
W	Worse
S	Susceptible
R	Resistant
I	Intermediate
MS	Moderately susceptible. Indicates for microbiology susceptibilities only.
NS	Non-susceptible
SDD	Susceptible-dose dependent
IE	Insufficient evidence
SYN-R	Synergy - resistant
SYN-S	Synergy - susceptible
VS	Very susceptible. Indicates for microbiology susceptibilities only.
POS	Positive
NEG	Negative
IND	Indeterminate
DET	Detected
ND	Not Detected
AC	Anti-complementary substances present
TOX	Cytotoxic substance present
QCF	Quality Control Failure
RR	Reactive
WR	Weakly reactive
NR	Non-reactive
OBX	Interpretation qualifiers in separate OBX segments
HM	Hold for Medical Review

The Table below lists HL7 Interpretation Codes for HL7 version **2.3**.

Value	Description
L	Below low normal
H	Above high normal
LL	Below lower panic limits
HH	Above upper panic limits
<	Below absolute low-off instrument scale
>	Above absolute high-off instrument scale
N	Normal (applies to non-numeric results)
A	Abnormal (applies to non-numeric results)
AA	Very abnormal (applies to non-numeric units, analogous to panic limits for numeric units)
U	Significant change up
D	Significant change down
B	Better--use when direction not relevant
W	Worse--use when direction not relevant
S	Susceptible. Indicates for microbiology susceptibilities only.
R	Resistant. Indicates for microbiology susceptibilities only.
I	Intermediate. Indicates for microbiology susceptibilities only.
MS	Moderately susceptible. Indicates for microbiology susceptibilities only.
VS	Very susceptible. Indicates for microbiology susceptibilities only.

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