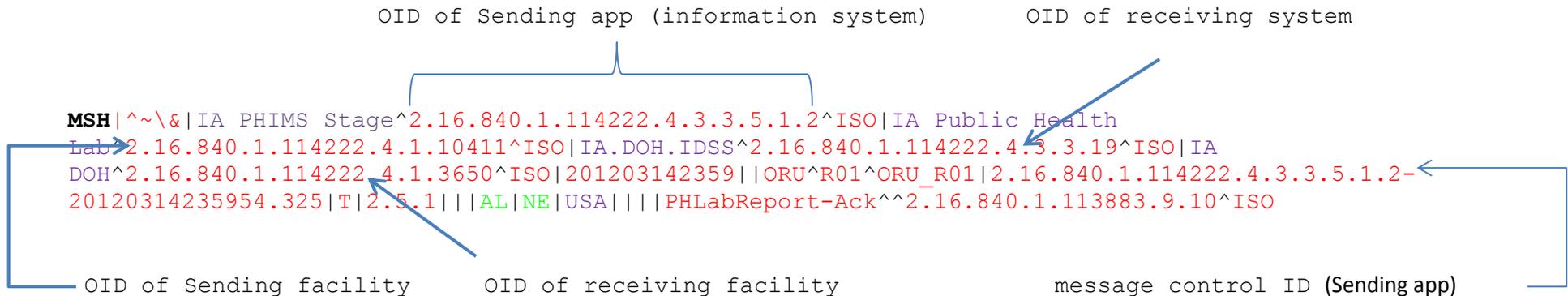


The Entire Sample Message (simple form)

MSH|^~\&|IA PHIMS Stage^2.16.840.1.114222.4.3.3.5.1.2^ISO|IA Public Health
Lab^2.16.840.1.114222.4.1.10411^ISO|IA.DOH.IDSS^2.16.840.1.114222.4.3.3.19^ISO|IA
DOH^2.16.840.1.114222.4.1.3650^ISO|201203142359||ORU^R01^ORU_R01|2.16.840.1.114222.4.3.3.5.1.2-
20120314235954.325|T|2.5.1||AL|NE|USA|||PHLabReport-Ack^^2.16.840.1.113883.9.10^ISO
SFT|Orion Health^L|2.4.3.52854|Rhapsody|2.4.3.52854||20070725111624
PID|1||14^^^IA PHIMS Stage&2.16.840.1.114222.4.3.3.5.1.2&ISO^PI^IA Public Health
Lab&2.16.840.1.114222.4.1.10411&ISO||Finn^Huckleberry^^^^L||19630815|M|2106-
3^White^CDCREC^^^^04/24/2007~1002-5^American Indian or Alaska Native^CDCREC^^^^04/24/2007|721
SPRING STREET^^GRINNELL^IA^50112^USA^H|||M^Married^HL70002^^^^2.5.1|||H^Hispanic or
Latino^HL70189^^^^2.5.1
ORC|RE||986^IA PHIMS Stage^2.16.840.1.114222.4.3.3.5.1.2^ISO||A|||^SAWYER TOM
MD^^^^^^L|||MISSOURI DEPARTMENT OF HEALTH LABORATORY - MISSOURI DEPARTMENT OF HEALTH
LABORATORY^L|307 W MCCARTY ST^^JEFFERSON CITY^MO^65101^USA^B|^WPN^PH^^1^^5555555
OBR|1||986^IA PHIMS Stage^2.16.840.1.114222.4.3.3.5.1.2^ISO|625-4^Bacteria identified in Stool by
Culture^LN^^^^2.33^Enteric Culture||20120301|||^SAWYER TOM
MD^^^^^^L|||201203140957||P
NTE|1|L|Enteric culture includes testing for Salmonella, Shigella, Campylobacter, Yersinia, E.coli
O157:H7 \T\ other STECs, and Aeromonas|RE^Remark^HL70364^^^^2.5.1
OBX|1|CWE|625-4^Bacteria identified in Stool by Culture^LN^^^^2.33^result1|1|27268008^
Salmonella^SCT^^^^20090731^^Salmonella species||A^A^HL70078^^^^2.5||P||20120301||
Bacterial Culture||201203140957|||State Hygienic Laboratory^L^^^IA Public Health
Lab&2.16.840.1.114222.4.1.10411&ISO^FI^^^16D0648109|State Hygienic Laboratory^UI Research Park -
Coralville^Iowa City^IA^52242-5002^USA^B^^19103|^Atchison^Christopher^^^^^^L
SPM|1|^2012999999&IA PHIMS Stage&2.16.840.1.114222.4.3.3.5.1.2&ISO||119339001^Stool specimen
(specimen)^SCT^SL^Stool^L^20090731^v unknown|||P^Patient^HL70369^^^^2.5.1|||20120301|
201203061451

The Message Header (MSH) Segment

The Message Header provides sending system and facility information as well as receiving system and agency information. It also contains the message control ID used to uniquely identify each message sent from the facility.



You must obtain OIDs specific to your system either from your vendor or from an organization that maintains an OID registry. See page 27 in the IDPH Implementation Guide and Constrained Profile.

OID = Universal Object Identifier

Required (R) – The field must be in the message and the field must be populated with a value.

Required/Empty (R/E) – The field must be in the message, but it does not have to be populated. Send it if you have it.

Conditional (C) – If the condition is met, this field must be in the message and must be populated with a value.

Conditional/Empty (CE) – If the condition is met, this field must be populated; if the condition is not met, this field must be empty.

The Software (SFT) Segment

The software segment provides information about the sending application or the integration engine used to manipulate the message before the receiving application processes the message (preferred since sending app or information system already identified in the MSH segment).

Software release number Software install date

SFT|Orion Health^L|2.4.3.52854|Rhapsody|2.4.3.52854||20070725111624

Software binary ID
(or repeat of Software release number)

Required (R) – The field must be in the message and the field must be populated with a value.

Required/Empty (R/E) – The field must be in the message, but it does not have to be populated. Send it if you have it.

Conditional (C) – If the condition is met, this field must be in the message and must be populated with a value.

Conditional/Empty (CE) – If the condition is met, this field must be populated; if the condition is not met, this field must be empty.

The Common Order Information (ORC) Segment

The Common Order Segment identifies basic information about the order for testing the specimen. This segment includes identifiers for the order, who placed the order, when it was placed, what action to take regarding the order, etc.

Order status code



```
ORC|RE||986^IA PHIMS Stage^2.16.840.1.114222.4.3.3.5.1.2^ISO||A|||||^SAWYER TOM  
MD^^^^^^L|||||||MISSOURI DEPARTMENT OF HEALTH LABORATORY - MISSOURI DEPARTMENT OF HEALTH  
LABORATORY^L|307 W MCCARTY ST^^JEFFERSON CITY^MO^65101^USA^B|^WPN^PH^^1^^555555
```

The ordering physician name is required. If your system has only one field for this information, populate 12.2.1 with the first, last, and title as seen above.

The shaded values should to be populated if your system can pass the value and mapped in the smartLab.

Required (R) – The field must be in the message and the field must be populated with a value.

Required/Empty (R/E) – The field must be in the message, but it does not have to be populated. Send it if you have it.

Conditional (C) – If the condition is met, this field must be in the message and must be populated with a value.

Conditional/Empty (CE) – If the condition is met, this field must be populated; if the condition is not met, this field must be empty.

The Observation Request (OBR) Segment

The Observation Request Segment is used to capture information about one test being performed on the specimen. Most importantly, the OBR identifies the type of testing that was requested on the specimen and ties that information to the healthcare provider ordering the test.

```
OBR|1||986^IA PHIMS Stage^2.16.840.1.114222.4.3.3.5.1.2^ISO|625-4^Bacteria identified in Stool by  
Culture^LN^^^^2.33^Enteric Culture|||20120301|||||^SAWYER TOM  
MD^^^^^L|||||201203140957|||P
```

LOINC code

LOINC Long name description

Name of coding system; LN=LOINC

LOINC codes are required in 2 different places in the HL7 2.5.1 standard message:

1. OBR4 - above
2. OBX3 - below

Whenever considering a standard code (LOINC or SNOMED), there is always a 'triplet' associated with each location. The 'triplet' refers to the 3 components that always are used together:

1. The code value itself
2. The description of the code (either the Long Name or the Short Name description)
3. The name of the coding system.

The standard code set should always occupy the first triplet position and the local code set, if included, should always occupy the second triplet position. The example above does not include populated values for the local codes set.

Required (R) – The field must be in the message and the field must be populated with a value.

Required/Empty (R/E) – The field must be in the message, but it does not have to be populated. Send it if you have it.

Conditional (C) – If the condition is met, this field must be in the message and must be populated with a value.

Conditional/Empty (CE) – If the condition is met, this field must be populated; if the condition is not met, this field must be empty.

The Notes and Comments (NTE) Segment

The Notes and Comments Segment is used to convey additional comments regarding the associated segment. The NTE segment is not intended for automatic processing. The contents of the NTE segment are primarily intended for human use. Automated process should not be based upon the contents of NTE-3 (Comment); rather the content of that field should be displayed to humans.

```
NTE|1|L|Enteric culture includes testing for Salmonella, Shigella, Campylobacter, Yersinia, E.coli  
0157:H7 \T\ other STECs, and Aeromonas|RE^Remark^HL70364^^^^2.5.1
```

An NTE segment may, but is not required to, accompany the PID segment, the OBR segment, or the OBX segment. At IDPH, OBR and OBX NTE segments will be combined into the ELR Notes associated with each separate result. NTE segments linked to the PID segment are not presently mapped at IDPH and will be ignored unless IDPH learns that a PID NTE segment is commonly used.

IDPH is unable to perform text analysis of the Comments component of the NTE segment. For this reason, information that is assumed for automatic processing due to the very nature of interoperability should not be inserted into the NTE segment. Information sent using the Comments in the NTE segment are for human consumption only.

Required (R) – The field must be in the message and the field must be populated with a value.

Required/Empty (R/E) – The field must be in the message, but it does not have to be populated. Send it if you have it.

Conditional (C) – If the condition is met, this field must be in the message and must be populated with a value.

Conditional/Empty (CE) – If the condition is met, this field must be populated; if the condition is not met, this field must be empty.

The Observation Result (OBX) Segment

The Observation/Result Segment contains information regarding a single observation related to a single test (OBR segment) or specimen (SPM segment). This includes identification of the specific type of observation, the result for the observation, when the observation was made, as well as other information related to the observation such as the onset date of symptoms.

OBX5.9=CWE9 OBX8 Abnormal Flags SNOMED code OBX5.1=CWE1

```
OBX|1|CWE|625-4^Bacteria identified in Stool by Culture^LN^Cult^Cult1^L^2.33^^result1|1|27268008^
Salmonella^SCT^SA^Salmonella species^L^20090731^^
Salmonella species|||A^A^HL70078^A^A^L^2.5|||P|||20120301|||^^^^^^^
Bacterial Culture||201203140957|||State Hygienic Laboratory^L^IA Public Health
Lab&2.16.840.1.114222.4.1.10411&ISO^FI^^^16D0648109|State Hygienic Laboratory^UI Research Park -
Coralville^Iowa City^IA^52242-5002^USA^B^^19103|^Atchison^Christopher^^^^^^L
```

CWE is the expected data type for non-quantitative lab results. The data type in OBX2 changes the layout of OBX5 and the rules that apply (see p. 128 in the IDPH Implementation Guide "OBX.5 Table: Observation Value data types," which addresses different data types).

In electronic laboratory reporting (ELR), SNOMED codes are used to communicate laboratory results, specimen types, and specimen body site information.

There are 3 places where SNOMED codes are required in this simple message:

1. OBX5 - the laboratory result in this segment above
2. SPM4 - the specimen type in the next segment below; example: 25840006^Cerebrospinal fluid sample (specimen)^SCT
3. SPM8 - the specimen source site in the next segment below; example: 314221009^Ascending spinal cord tract (body structure)^SCT.

IDPH also requests that OBX23.10 always be populated with the performing laboratory's CLIA#.

The shaded values should be populated if your system can pass the value and mapped in the smartLab (standard or local codes accepted).

Required (R) – The field must be in the message and the field must be populated with a value.

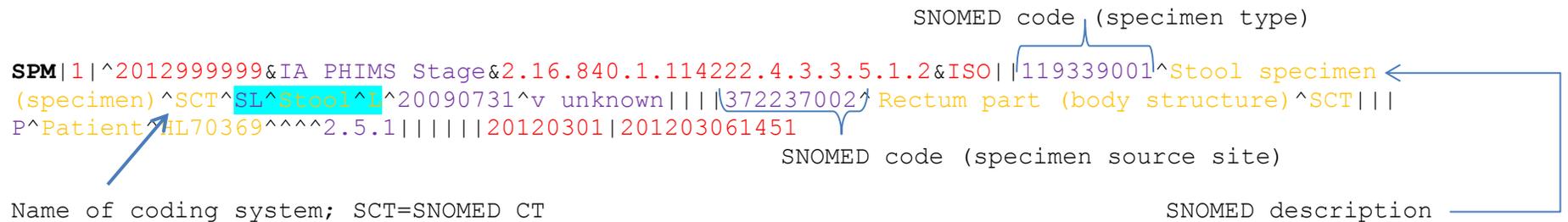
Required/Empty (R/E) – The field must be in the message, but it does not have to be populated. Send it if you have it.

Conditional (C) – If the condition is met, this field must be in the message and must be populated with a value.

Conditional/Empty (CE) – If the condition is met, this field must be populated; if the condition is not met, this field must be empty.

The Specimen Information (SPM) Segment

The Specimen Information Segment describes the characteristics of a single sample. The SPM segment carries information regarding the type of specimen, where and how it was collected, who collected it and some basic characteristics of the specimen.



SNOMED Code resources:

1. A decent free SNOMED browser can be found at <http://vts1.vetmed.vt.edu/>
2. RCMT Table found at <https://phinvads.cdc.gov/vads/SearchHome.action>

The shaded values should to be populated if your system can pass the value and mapped in the smartLab (standard or local codes accepted).

Required (R) – The field must be in the message and the field must be populated with a value.

Required/Empty (R/E) – The field must be in the message, but it does not have to be populated. Send it if you have it.

Conditional (C) – If the condition is met, this field must be in the message and must be populated with a value.

Conditional/Empty (CE) – If the condition is met, this field must be populated; if the condition is not met, this field must be empty.