



[Healthcare Organization]  
[Vendor [Result Type] System] to  
Medicity ProAccess Transcription  
Reports  
HL7 2.3

Delivery Date

Version 1.0 / Draft



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# 1 Introduction

The Medicity TRANS Results Inbound interface will support the receipt of HL7 ORU messages. This document defines and describes the HL7 event codes and messages that Medicity TRANS Results Inbound will accept. This document also describes how the Medicity TRANS Results Inbound interface will process each event.

This document contains the following chapters:

**Chapter 1: Introduction** – Includes the purpose and scope of the document, instructions on how to use it, and a list of related documents that can help you understand the subject matter.

**Chapter 2: Communication** – Details the generalized interaction and exchange of data.

**Chapter 3: The [Vendor [Result Type] System] System** – Used to record and identify the details regarding the organizations that will have ProAccess connectivity.

**Chapter 4: [Result Type] Interface Flow** – Describes the dataflow in the Medicity [Result Type] Interface model.

**Chapter 5: [Result Type] Trigger Events** – Describes the supported HL7 trigger events for given HL7 [Result Type] message types.

**Chapter 6: Message Definition and Processing** – Identifies the message structure the processing that occurs when it is processed.

**Chapter 7: HL7 Segment Layouts** – Defines HL7 data segments supported in a [Result Type] interface from a non-Medicity system to ProAccess.

## 1.1 Document Purpose

This document is designed to facilitate the collection and dispersal of information regarding the HL7 specification of HL7 event codes delivered by the client system to the Medicity ORU interface. Any related interfaces, such as orders will be documented in separate interface reference documents [Order Spec Name Here].

**Business Rule – When to define separate result specs:**

TRANS results specs should be created for each unique resulting filler system and for each specific department (RAD, LAB, PATH, TRANS, etc.). If there are 2 filling TRANS systems (Example: SoftMed and Medquist TRANS), there should be two TRANS Report specs.

## 1.2 Document Scope

- This document is not intended to be a compendium of knowledge regarding system interfaces or HL7 specifications.
- Background information on HL7 Interface standards is specifically excluded in this document
- Additional information about the items not covered in this manual can be found in the documents in section 1.3 of this document

## 1.3 Using This Document

This document is designed to be used by a Medicity Interface Architect to collect the information necessary to define the relationship between the client system and the Medicity.

### 1.3.1 Search and Replace

When first saving this document, perform a search and replace with the following:

Search for	Replace with
[Vendor [Result Type] System]	The name of the vendor system Example: HealthInfoSoft
[Healthcare Organization]	The name of the Medicity client Example: Healthcare, Inc
[Result Type]	The type of result

Following the search and replace instances detailed above, save the document with the vendor results system and, if necessary, a version number in the file name.

Example: [Client] [Vendor] TRANS to PA5 Medicity TRANS Results Spec v1.0.doc

There is also other highlighted text that needs to be replaced as part of the data collection process. For example, in Chapter 3, the data you need to collect includes the format for internal and external patient identifiers.

In most cases, the text that needs to be changed is **highlighted in yellow** to help you identify the items that need attention.

Once a document has been approved by QA, each version must have track changes enabled. This feature is available by clicking **Tools > Track Changes** from the Word menu bar.

After completing these tasks, you can delete this section.

### 1.3.2 Entering Text

In each table there is space to enter text where applicable. For example, Chapter 3 includes a table that has space for you to enter the names of the organizations that will and those that will not use the interface.

## 1.4 Referenced Documents

This document is not intended to be a complete results or HL7 technical reference document. The following documents can be a valuable resource in helping to understand the details of:

- One
- Two
- Three

## 1.5 Document Version

Author	Version	Date	Comments	Status
[Analyst], [Title], Medicity, Inc.	1.0			Draft

Editor	Version	Date	Comments	Status

## 2 Communications

### 2.1 Minimal Lower Level Protocol

Medicity will not use data validation mechanisms, such as checksums, often required with less reliable connections.

The generalized interaction and exchange of data proceeds as follows:

1. The initiating system (i.e. the system with data to send) constructs an HL7 message and transmits the message via an established connection to the receiving system.
2. The receiving system performs basic checks on the incoming message (ensures an HL7 wrapper <SB>dddd<EB><CR>). These edits are negotiable, but typically includes checking for the presence of required segments and possibly fields within segments. These basic checks focus on message structure validity and do NOT include data validation (e.g., a valid patient number).
3. If the message passes the basic checks in step 2, the receiver commits the message to safe storage.
4. The receiver sends an acknowledgement MSA segment to the initiating system. The receiving system sends the message on to the application layer, and the initiating system is free to send the next message once the acknowledgement is received by the sending system.
5. In the event that the sending system does not receive an acknowledgement, Medicity expects the sending system interface to automatically issue a TCP/IP Close Port Command, then recycle the interface to a 'Connect To' state. Medicity recommends that the sending system not setup an automatic retry of sending the message prior to recycling the interface and be configured to recycle the interface after not receiving an ACK.
6. Medicity recommends setting a maximum ACK timeout value of 5-10 seconds on the sending system.

### 2.2 Port Assignment for Results

Medicity strongly recommends sending application-specific HL7 messages on separate ports. For example, results would be sent to Medicity on a port separate from TRANS results or Pathology reports. In the event this cannot be accomplished Medicity will create a splitter processor that can allow Medicity to receive results, transcription on a single port and route them to the appropriate sub-processes (see 2.2.2 Message Router Custom Processing by Medicity)

#### 2.2.1 Results port assignments

Medicity uses the following port naming conventions:

If DEV, QA or CERT = 7XXX

If PROD = 8XXX

Example:

DEV: 7XX1

QA: 7XX1

CERT: 7XX1

PROD: 8XX1

Department Type:

- ADT = XXX0
- LAB Orders and Results = XXX1
- RAD Orders and Results = XXX2
- Transcription Results = XXX3
- Pathology Orders and Results = XXX4
- General Orders and Notes = XXX5
- Pharmacy Orders = XXX6
- Other Interfaces = XXX7 – XXX9

If there is more than one results interface from this data provider, the last port number should be incremented as follows:

- 7001 = First Results instance
- 7201 = Second Results instance

Environment	Port
CERT	7XX1
PROD	8XX1

## 2.2.2 Message Router Custom Processing by Medicity

Medicity strongly recommends that each interface be sent to a unique port to allow for expanded maintenance, monitoring and general throughput. However, if the sending system cannot support this request, Medicity can split the data feed into separate interface instances prior to processing.

The Message Splitter is a custom feature that **is not covered** in a standard Medicity interface scope. If a client should elect to have Medicity install the Message Splitter module, a scope change request must be completed and approved.

Formal acceptance of the risks associated with the sending system not being able to deliver interfaced data to separate ports must be discussed between the client and Medicity prior to enabling this function.

Interface Instance
How to identify the results contributing systems. Medicity uses string Regex expressions to make this determination.

## 2.2.3 Pre and Post-validation

The following are requirements for pre and post-validation:

- The Required/Medicity/Client Optional naming conventions defined for R/O fields will be used in the Pre and Post-validation Columns.
- The goal of the pre and post-validators is to ensure that the minimum required dataset is available in an incoming message.
- If a message does not pass the validation rules, the message is de-queued and the sending organization is notified via email.

- Validation Options Business Rules:
  - If a field is a Medicity or client required field, by default the pre- and post-validators should be configured to test that the field 'Is Not Null.'
  - If more complex data validation is required (example: Data is within a specified range of values), the validation criteria are to be defined within the comments section of the segment/field/component row of the data element table.
  - Validation Options:
    - Numeric/Alpha Numeric
    - Range of Values
    - Is Not Null

### 2.2.3.1 Pre-validation:

The goal of pre-validation is to ensure that the incoming message contains the minimum dataset necessary to populate all the Medicity and client required fields prior to transformation (if required)

Special consideration must be made for data elements that must be transformed as a required data element may not be in a Medicity 'expected' location. The pre-validation rules must take into account where the client source system is sending the data if the message is improperly structured by the sending system.

### 2.2.3.2 Post-validation:

The goal of post-validation is to ensure that after message transformation, the message contains the minimum dataset necessary to write the message to the database and meet the client minimum dataset requirements.

## 3 [Healthcare Organization] [Vendor [Result Type] System] System

[Healthcare Organization] uses the [Vendor [Result Type] System]. All TRANS Modalities will be defined in this specification.

### 3.1 Organizations

[Healthcare Organization] will have the ProAccess Repository and Organization configuration listed in the table below. All organizations in [Healthcare Organization] that are to be part of this interface should be listed in the table below. Medicity Reference Value Org Names shall always be defined in Upper Case.

Repository	Organization	Identified in Message By	Medicity Reference Value
		MSH:04	

**Note:** Separate configurations per organization will be required for the translator and database writer. The project manager is responsible for filling out the repository overview.

**Note:** The repository overview will be addressed in the integration scope document developed by the Project Manager and Integration Analyst. This scope document is to be defined before any specs are developed.

### 3.2 Contributing System

[Healthcare Organization] will have the ProAccess Contributing System configuration listed in the table below.

Organization	Sending Application	Identified in Message By	Medicity Reference Value
		MSH:03	MSH:04 + TRANS

**Note:** Separate configurations per contributing system will be required for the translator and database writer.

## 3.3 Medicity Business Rules and Guidelines

### 3.3.1 Patient Matching

For this results interface, Medicity attempts to match all valid patients within the [Healthcare Organization] Repository to the same patient. Medicity expects the MRN and Account number format to be consistent between sending systems within a hospital organization. If this is not possible – see section 8 Processing Performed by Medicity.

#### 3.3.1.1 Patient Identifiers configured for this interface

A client may use up to four of these identifiers for an interface. The most commonly used identifiers are “Internal Patient Identifier” and “Patient Account Identifier.”

**Note:** Within ProAccess, “Internal Patient ID” is considered the MRN. External Patient Identifier is used as an EMPI patient identifier.

Identifier from [Vendor Results System]	Identifier in Medicity	Format	Validation Rule (Exists/Alpha-Num/Custom Format)
Internal Patient Identifier	PID:3	XXX-XX-XXXX	
External Patient Identifier	PID:2	XXXXXXXX	
Alternate Patient Identifier	PID:4	999999999	
Patient Account Identifier	PID:18	000999	

### 3.3.1.2 Add/Update Setting

ProAccess has the capability of handling the creation/update of a patient record in the following ways:

- Add/Update:
  - If the patient identified in an inbound message does not currently exist within this ProAccess Organization, a new patient record will be added.
  - If the patient identified in an inbound message does currently exist within this ProAccess Organization, the patient record **will** be updated with the patient demographics within the inbound message.
  - This setting is most often used with a results interface that does not have a corresponding ADT interface that is considered the Patient Demographics system of record or authority and the results interface is the Patient Demographics system of record.
- Add Only:
  - If the patient identified in an inbound message does not currently exist within this ProAccess Organization, a new patient record will be added.
  - If the patient identified in an inbound message does currently exist within this ProAccess Organization, the patient record **will not** be updated with the patient demographics within the inbound message.
  - This setting is most often used with a results interface that has a corresponding ADT interface that is considered the Patient Demographics system of record or authority.

Database Writer Configuration Value for Patient Matching	Configuration
patient_process value=	ADDONLY or ADDUPDATE
encounter_process value=	ADDONLY or ADDUPDATE

### 3.3.2 Encounter or Visit Matching

[Vendor [Result Type] System] system sends a patient account number to which charges, payments, etc., are recorded. This is required on all account-based events. The Medicity ProAccess system prefers to use the patient account number to uniquely match all encounters. The Visit Identifier can be used as an optional visit/encounter matching identifier.

Identifier from [Vendor Results System]	Identifier in Medicity	Format	Validation Rule (Exists/Alpha-Num/Custom Format)
Patient Account Identifier	PID:18	000999	
Visit Identifier	PV1:19	XXXXXXXX	

The values in the table above should only reflect the values to be used in this interface. If the visit identifier is not used, the row should be grayed out.

### 3.3.3 Physician Matching

[Vendor [Result Type] System] system always sends a unique identifier for physicians for all related positions to patients and patient’s encounters. When a physician identifier is received that is not pre-built in the PersonnelRef table the physician will be added. The physician ID number format will be [fill in the blank].

#### 3.3.3.1 Physician Matching Business Rules:

- If a physician ID is sent, Medicity will match on the ID. If there is no match by ID then Medicity will create the physician record with the provided ID and name.
- If a physician ID is not sent, Medicity attempts to match based on free text matching an agreed upon free text physician ID and name.
- Both ID and last name must be provided. If both are not provided, there will be impacts to provider to patient relationships, result delivery, etc.

#### 3.3.3.2 Physician Matching Common Issues:

- If an ID is provided without a provider name, Medicity will write the ID to the provider table with the name of ‘Unknown Physician.’
- This feature will allow a relationship to be established between a provider ID and a patient/result.
- Clients will often default a provider ID to a default provider ID if the provider is not known. This default value must be included in this specification.
- The format of physician ID needs to be standardized. If system A sends 0123 and system B sends 123 for the same provider, the data sender shall normalize the provider ID format between systems.
- The ID format must be consistent or made consistent across the results and all other interfaces.
- Medicity will evaluate ORC:12 and/or OBR:16 to determine the Ordering Provider. It is important to note that the OBR:16, if populated will be used to populate the ordering provider field in ProAccess. As HL7 provides for 2 ordering provider fields in the ORU message the OBR takes priority.

Provider ID		Format	Validation Rule (Exists/Alpha-Num/Custom Format)
Ordering Provider ID (OBR:16.1)			
16.1	Provider ID	<u>R</u>	
16.2	Last Name	<u>R</u>	

16.3	First Name	<u>O</u>		
16.4	Middle Name	<u>O</u>		
16.5	Suffix	<u>O</u>		
16.6	Prefix	<u>O</u>		
16.7	Degree	<u>N</u>		

**Note:** Medicity expects that all Provider ID's will match the formatting of the Attending Provider ID as described above

**Note:** Medicity does not currently support the degree field.

### 3.3.3.3 Physician Free-text matching

If a physician record is created in 'freetext' mode (we receive a provider name without an ID) Medicity will create a 'free text' provider ID. The format of the free text provider ID is specified in the table below. The format of the default provider ID must be defined and agreed to by the data provider.

Free-Text Physician Identifier from [Vendor Results System]	Identifier in Medicity
Ex.  ^Smith^John^A^Jr	Medicity will configure the database parser to accept "99999" as the free-text provider ID. Example: 99999^Smith^John^A^Jr

## 3.4 Nexus Metadata to be captured for this Interface

Metadata is used on the Nexus engine for transaction searching purposes. Nexus is already configured to provide a set of searchable items. The list of standard Metadata items and any custom items are listed below. To ensure optimal performance, custom metadata elements are not available without approval from the Medicity Product Management Team.

Metadata item to be captured	Identified in Medicity after message transformation
SendingApplicationID	MSH:3
MessageControlID	MSH:10
Event	MSH:9.2
PatientID	PID:3
AlternatePatientID	PID:4
PatientLastName	PID:5.1
PatientMiddleName	PID:5.3
PatientFirstName	PID:5.2
PatientAccountNo	PID:18
Placer	OBR:2
Filler	OBR:3
OrderedTest	OBR:4.1
PlacerAccession	OBR:18
FillerAccession	OBR:20

## 3.5 Down Time Process

The intent of this section is to identify any issues related to the assignments of patient account numbers and medical record numbers that do not fall within the normal pool of patient account numbers and medical record numbers that are available when a downtime event is to in play.

If different pools of MRN and Account Numbers are used during downtime, we need to know how those numbers are reconciled after the downtime event has ended.

### 3.5.1 Unscheduled Downtime

[Cut-n-Paste Client Unscheduled Downtime Procedures]

### 3.5.2 Example Purposes - Unscheduled Downtime

1. A list of downtime MRNs and account numbers is provided to the registrars.
2. When Lab and Radiology receives an order on a paper requisition from for entry into the Lab or Radiology system, an alpha lookup is done for a valid MRN.
  - If the patient exists, the MRN is used with downtime account number.
  - If the patient does not exist, downtime MRN and account number are used.
3. When the HIS resumes operation, registrars perform the alpha look up for the valid MRN.
  - If the patient exists, the MRN is used with downtime account number.
  - If the patient does not exist, downtime MRN and account number are used.
4. When Lab and Radiology is turned on, the Lab and Radiology results are sent with the matching PID segment information.
5. If duplication makes merging necessary, it is handled by the Medical Records department as follows:
  - Inpatients – the merge will occur after discharge.
  - Outpatients – the merge will occur within a few days.
6. Lab and Radiology receives the merge request and merges the patient data. Medical Records deletes the unnecessary MRN.

### 3.5.3 Scheduled Downtime

[Cut-n-Paste Client Scheduled Downtime Procedures]

### 3.5.4 Example Purposes - Scheduled Downtime

1. The registrars are given a medical record number index to locate an existing patient.
  - If the patient does not exist, the “Unscheduled downtime” procedure is used.
  - If the patient does not exist, downtime MRN and account number are used.
2. A list of downtime MRNs and account numbers is provided to the registrars.
3. The Lab and Radiology receive results on paper request form for entry into the system. The results are attached to the MRN and downtime billing number.
4. When the HIS resumes operation, these numbers are used to register the patient with the Lab and Radiology interface turned off.

- When the Lab and Radiology interface is turned on, the lab and radiology results are sent with the matching PID segment information.

## 3.6 Result Matching

Medicity requires a unique identifier per clinical result event for matching all succession of result transactions for that unique clinical result. Therefore, Medicity requires that vendor system send a unique value in OBR:2 or Medicity must construct a unique value in OBR:2..

### Terms:

Pool: Collection of unique numbers that are never re-used

Since TRANS Results can originate in the [Vendor [Result Type] System], different ranges of placer number in each system must be received.

Medicity groups results by accession number. Medicity uses OBR:20 (filler field 1/Medicity Accession Number) to receive the accession number. OBR:20 is required for results.

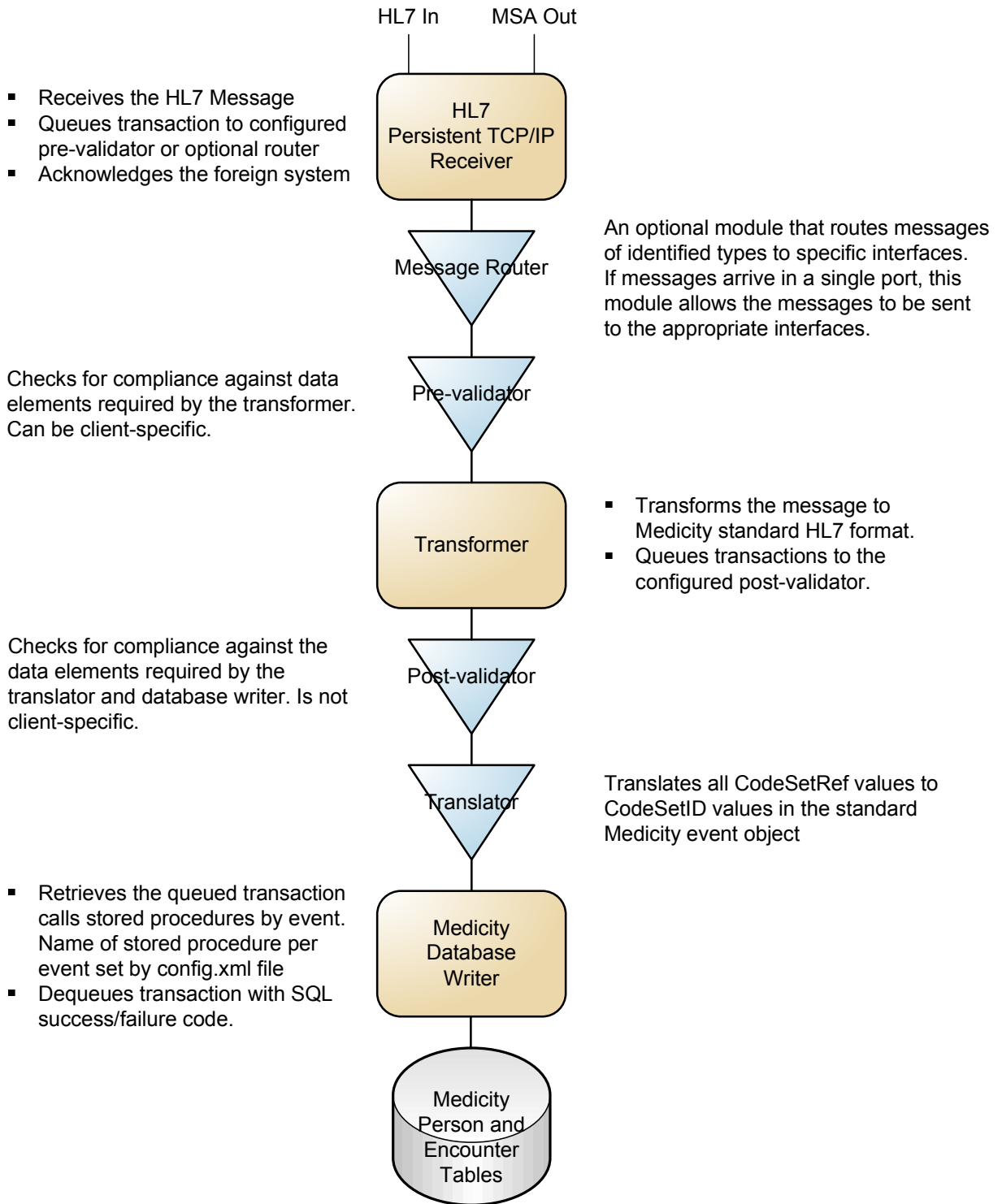
Spec writer Notes/Consideration:

- It is important to ensure that OBR-2 is a unique value that will not be reused to after a certain timeframe.
- Need to ensure that OBR-2 is consistently valued across related results interfaces Need to ensure that OBR:2 (filler field 1/Medicity Accession Number) is indeed the accession number used to group related order events.
- Answer question: How are accession numbers generated?

Identifier from Results Interface	HL7 Field	Medicity assumptions to be evaluated and confirmed or denied.	Match	Custom Processing Required?	Client-specific implementation notes
Medicity Placer Number	OBR:2/ORC:2	Historically, the order management number that is considered to be unique	Yes/No	Yes. See section XXXXXX	Example: Based on discussion with client, the place number is only unique within the encounter. Medicity will have to manufacture this number by pre-pending the encounter number in the transformer.
Medicity Filler Number	OBR:3/ORC:3	Historically, the filler number assigned by the RIS that is considered to be unique. Sometimes the same as OBR20.	Yes/No	No	
Filler Field 1 (Medicity Accession Number)	OBR:20	Historically, the RIS Accession number, meant to aggregate one or more ordered tests on one report. Sometimes the same as OBR3.	Yes/No	No	

Placer Field 1 (Placer Accession Number)	OBR:18	Historically, has been used by some TRANS Systems to uniquely identify an ordered test	Yes/No	No	
--	--------	--	--------	----	--

# 4 TRANS Results Inbound Interface Flow



## 4.1 Interface Names

The following rules and standards should be followed when naming interfaces and instances.

### 4.1.1 Standardizing Interface and Instance Names

Use a standard format for all interface names. This makes it easy for the client to look in Nexus and easily understand which interfaces they are looking at. Components that should make up the interface names are:

- Value we are changing MSH:4 to. (ex: HMA, WCH, ....etc)
- Type of interface (ADT, LAB, PATH, RAD, TRANS, PACS, etc)
- Type of messages (results vs. orders)
- Designation of Inbound or Outbound to or from Meditrust (In vs. Out)
- Name must be under 50 char and spaces are included in that count.
- No special character should be used in the name of an instance
- No spaces should be used in the name of an instance
- Interface type should be in all CAPS.

Client Example: City Center

Description	Name
City Center Trans Report interface	CCTRANSReportsIn
City Center Trans Receiver	CCTRANSReceiver
City Center Message Router	CCRouter
City Center Trans Pre-validator	CCTRANSPreValidator
City Center Trans Transformer	CCTRANSTransformer
City Center Trans Post-validator	CCTRANSPostValidator
City Center Translator	CCTranslator
City Center Database Parser	CCDBParser
City Center MPI Writer	CCMPIWriter
City Center Delivery Preferences Router	CCDeliveryPrefRouter
City Center Trans Worklist Writer	CCWorklistWriter

### 4.1.2 Interface Module Names

In the space provided below, list the interface and instance names used for the client.

## 5 ORU Trigger Events

This interface will support the following HL7 trigger events for the HL7 TRANS message type:

HL7 Trigger Event	Trigger	Event Code
Display Results	ORU	R03

## 6 Message Definition and Processing

### 6.1 Display Results ORU (R03)

The Medicity ORU Inbound interface will accept Display Results using the R03 trigger. Each result test code will be added to the result table with the respective result detail information.

Order status for each order will be based on the following ORC:1 (Order Control) value:

ORC:1 Order Control	ProAccess Order Status
RE – Result	Resulted

**Note:** Rows listed in gray will not be used in this interface and should be filtered out of the interface by the sending organization's interface engine.

#### 6.1.1 Results ORU (R03) Message Structure

##### Message

Event TYPE: **ORU**

Event CODE: **R03**

##### Notes:

- The cardinal order of the segments below shall be followed as defined in the table below. Medicity requires the segments to be sent in this specific order.
- Any Medicity-optional segments not sent by the data provider should be grayed out in the table below.
- If additional segments are requested by the client, a formal product change request must be submitted and will be considered for a future product release.
- If a client sends a Z segment that contains data that needs to be mapped to a supported segment, it must be listed in the table below. Custom mapping between the Z segment and the supporting segment will be defined in the custom processing of the segment that will receive the Z segment data.
- If a client sends a Z segment that Medicity can ignore in its entirety, the segment should be listed in the table below and grayed out with a comment that Medicity will not support this segment.

Segment	Segment Name	Comments
MSH	Message Header	Required
PID	Patient Identification	Required
PV1	Patient Visit	Required
{		
ORC	Common Order	Required
OBR	Observation Report	Required

Segment	Segment Name	Comments
{[NTE]}	Order Comments	Optional
{OBX	Result	Required
}		
}		

Example R03 Result Message from [Vendor [Result Type] System]:

```
MSH|^~\&|SUNQ|001|SUNQ|001|200310140015||ORU^R01|06017|P|2.2||AL|NE
PID|0001||000158967||LAST^FIRST MIDDLE^^^|19210209|F||C|1290 MAIN RD APT
201^^CHARLESTON^WV^26003-0000^USA^^100|(800)555-1212|(800)555-
1313||S|AA|2844577^^^|111-11-1111|||CHARLESTON WV
ORC|RE|9721860^[[VENDOR]]|1803027^[[VENDOR]]|||200311031330|||011467^LAST^BRIAN^^^
OBR||9721860^[[VENDOR]]|1803027^[[VENDOR]]|CTHD3||200311031507|||HEADACHES/3 WEEKS
|200311031325||011467^LAST^BRIAN^^^|||CT2|200311031330||F|^M30^200311031325^R||
|AMB|||000032^SMITH^JOHN^RT^^^|^LAST^FIRST^^^|200311040807
ZRP||
ZTT|000032^SMITH^JOHN^RT^^^|^|^OP^|^OP^|010147^DOE^JANE^DL^^^|600
ZTM|CTHD3^CT BRAIN +/-CONCTHD3^CT BRAIN +/-CON;^[[VENDOR]]|CT PEDIATRIC PREP|CTHD3^CT
BRAIN +/- CONTRAST|X420092
ZAU|
ZRI|010779^JONES^JOHN^^L.^^^||010779^JONES^JOHN^^L.^^^
ZAS|1803027||200311031559
OBX|1|FT|CTHD3GDT|1|CT HEAD WITH AND WITHOUT IV CONTRAST - 11/03/2003|||F
OBX|2|FT|CTHD3GDT|1|||F
OBX|3|FT|CTHD3GDT|1|CLINICAL HISTORY: Behavioral changes, headaches.|||F
OBX|4|FT|CTHD3GDT|1|||F
OBX|5|FT|CTHD3GDT|1|TECHNIQUE: Noncontrast and contrast enhanced CT scan of the brain
is|||F
OBX|6|FT|CTHD3GDT|1|performed. The patient received 28 cc of Omnipaque 300
contrast|||F
OBX|7|FT|CTHD3GDT|1|material intravenously.|||F
OBX|8|FT|CTHD3GDT|1|||F
OBX|9|FT|CTHD3GDT|1|FINDINGS:||||F
OBX|10|FT|CTHD3GDT|1|The ventricles are normal size and midline. There is a
subcentimeter||||F
OBX|11|FT|CTHD3GDT|1|low-density area involving the high left frontal lobe. This
appears||||F
OBX|12|FT|CTHD3GDT|1|to involve the subcortical white matter. This shows no
enhancement||||F
OBX|13|FT|CTHD3GDT|1|following IV contrast administration. This may represent a tiny
area||||F
OBX|14|FT|CTHD3GDT|1|of encephalomalacia due to a previous insult. This could
be||||F
OBX|15|FT|CTHD3GDT|1|posttraumatic or ischemic in etiology. No other areas of
abnormal||||F
OBX|16|FT|CTHD3GDT|1|attenuation are identified in the brain. Following
contrast||||F
OBX|17|FT|CTHD3GDT|1|administration, no areas of abnormal enhancement are present in
the||||F
OBX|18|FT|CTHD3GDT|1|brain.|||F
OBX|19|FT|CTHD3GDT|1|||F
OBX|20|FT|CTHD3IMP|1|IMPRESSION:||||F
OBX|21|FT|CTHD3IMP|1|||F
OBX|22|FT|CTHD3IMP|1|1. SUBCENTIMETER LOW-DENSITY AREA IN HIGH LEFT FRONTAL
SUBCORTICAL||||F
OBX|23|FT|CTHD3IMP|1|WHITE MATTER. THIS MAY REPRESENT A TINY AREA OF ENCEPHALOMALACIA
OF||||F
OBX|24|FT|CTHD3IMP|1|UNCERTAIN ETIOLOGY AND SIGNIFICANCE. MRI MIGHT BE USEFUL TO
```

FURTHER|||||F  
 OBX|25|FT|CTHD3IMP|1|EVALUATE THIS AREA TO EXCLUDE A CONGENITAL ANOMALY AT THIS SITE.|||||F  
 OBX|26|FT|CTHD3IMP|1|END OF IMPRESSION:|||||F  
 OBX|27|FT|CTHD3GDT|2|MB/cmK|||||F

## Transformed to Medicity R03 Result Message:

MSH|^~\&|[Sending System LAB]|[Sending Facility]|[ProAccess|ProAccess|200310140015||ORU^R03|06017|P|2.5|||||  
 PID|0001||000999999||LAST^FIRST MIDDLE^^^||19210209|F||C|1290 MAIN RD APT 201^^CHARLESTON^WV^26003-0000^USA^^|| (800)555-1212|(800)555-1313||S|AA|2844577|111-11-1111||||CHARLESTON WV  
 PV1|1|E|ER||||19998^EMERGENCY ROOM PHYSICIAN|10484^JONES MD, CHRISTOPHER A||ER||||M||||E|000|||||||||||||||||200310132254  
 ORC|RE|9721860|1803027|||||200311031330|||011467^LAST^BRIAN^^^  
 OBR|1|9721860|1803027|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST  
 |||200311031507|||||011467^LAST^BRIAN^^^|||9721860||200311031330||TRANS|F||  
 ^^200311031325^^R||||011467^LAST^BRIAN^^^|||  
 OBX|1|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|CT HEAD WITH AND WITHOUT IV CONTRAST - 11/03/2003|||||F  
 OBX|2|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|||||F  
 OBX|3|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|CLINICAL HISTORY: Behavioral changes, headaches.|||||F  
 OBX|4|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|||||F  
 OBX|5|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|TECHNIQUE: Noncontrast and contrast enhanced CT scan of the brain is|||||F  
 OBX|6|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|performed. The patient received 28 cc of Omnipaque 300 contrast|||||F  
 OBX|7|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|material intravenously.|||||F  
 OBX|8|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|||||F  
 OBX|9|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|FINDINGS:|||||F  
 OBX|10|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|The ventricles are normal size and midline. There is a subcentimeter|||||F  
 OBX|11|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|low-density area involving the high left frontal lobe. This appears|||||F  
 OBX|12|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|to involve the subcortical white matter. This shows no enhancement|||||F  
 OBX|13|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|following IV contrast administration. This may represent a tiny area|||||F  
 OBX|14|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|of encephalomalacia due to a previous insult. This could be|||||F  
 OBX|15|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|posttraumatic or ischemic in etiology. No other areas of abnormal|||||F  
 OBX|16|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|attenuation are identified in the brain. Following contrast|||||F  
 OBX|17|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|administration, no areas of abnormal enhancement are present in the|||||F  
 OBX|18|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|brain.|||||F  
 OBX|19|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|||||F  
 OBX|20|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|IMPRESSION:|||||F  
 OBX|21|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|||||F  
 OBX|22|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|1. SUBCENTIMETER LOW-DENSITY AREA IN HIGH LEFT FRONTAL SUBCORTICAL|||||F  
 OBX|23|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|WHITE MATTER. THIS MAY REPRESENT A TINY AREA OF ENCEPHALOMALACIA OF|||||F  
 OBX|24|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|UNCERTAIN ETIOLOGY AND SIGNIFICANCE. MRI MIGHT BE USEFUL TO FURTHER|||||F

OBX|25|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|EVALUATE THIS AREA TO EXCLUDE A  
CONGENITAL ANOMALY AT THIS SITE.|||||F  
OBX|26|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|1|END OF IMPRESSION:|||||F  
OBX|27|TX|CTHD3^CT HEAD WITH AND WITHOUT IV CONTRAST|2|MB/cmK|||||F

## 7 HL7 Segment Layouts

This chapter defines HL7 data segments supported in an results interface from a non-Medicity system to ProAccess.

The Segment Definition Tables are populated as follows:

### HL7 Segment Layouts - Column Heading Explanation

Heading	Contents	Values
Seq.	HL7 Field Sequence	Begins with '01' for each segment.
Name	HL7 Field Name	Defined by HL7.
R/O	Field/Component Required by ProAccess	<p><u>R</u> - Medicity required field  <u>N</u> - Not supported by Medicity  <u>C</u> - Conditional  <u>O</u> - Optional  R - Client Required  N - Client Not Supported  C - Client Conditional  O - Client Optional</p> <p>Rules regarding graying out rows  <u>R</u> - Always white  <u>N</u> - Always gray  <u>C</u> - Can grey  <u>O</u> - Can grey  R - Always white  N - Can grey  C - Always white  O - Always white</p> <p>Business Rules</p> <ul style="list-style-type: none"> <li>When client downstream system has a requirement to have a Medicity Optional field as required, maintain Medicity notation and add a '-' and add the client 'R' notation</li> <li>When a field is conditional, the conditions must be defined in the comments section of the data element</li> <li>When a Conditional or Optional field is grayed out by the spec writer, the reason why must be defined in the comments section.</li> </ul>
Comment	ProAccess Field Usage Comments	

**Note:** Rows displayed in **gray** were reviewed but will not be used in this interface.

If a field is marked as not supported by Medicity, an application enhancement would be required to add the additional data and would need to be a part of a sanctioned product release.

If a field is marked as required by Medicity and cannot be provided by the data provider, a formal HL7 configuration discussion must take place between Medicity and the client as adverse effects will be encountered within the product if required data cannot be provided.

## 7.1 Control Segments

### 7.1.1 The MSH Segment—Message Header

The MSH segment defines the characteristics of the message. The sending and receiving applications are identified. The encoding characters used as delimiters for the message are also indicated. The MSH message type is used to indicate the type of message being transmitted.

In the MSH of the ACK response, the values of the Sending Application, Sending Facility, Receiving Application, and Receiving Facility will be the reverse of the values in the original message.

**Note:** The entry in the R/O column is post-validator.

#### Segment Layout

MSH Seq	Name	R/O	Comments
01	Field separator	<u>R</u>	Field separator. Value required is “ ” – ASCII(124)
02	Encoding Character	<u>R</u>	Used to separate data field components, repeating data elements, and text control characters. Must be printable characters that will never be included in transmitted data. Required values: Pos 1: Component Separator ‘^’ - ASCII(94) Pos 2: Repetition Separator ‘~’ - ASCII(126) Pos 3: Escape ‘\’, ASCII(92) Pos 4: Sub-component ‘&’ - ASCII(38).
03	Sending Application	<u>R</u>	See section 8 Processing Performed by Medicity.
04	Sending Facility	<u>R</u>	See section 8 Processing Performed by Medicity.
05	Receive Application	<u>R</u>	See section 8 Processing Performed by Medicity.
06	Receiving Facility	<u>N</u>	
07	Date/Time of Message	<u>R</u>	System date and time the message was formatted in the sending system.
08	Security	<u>N</u>	
09	Message Type	<u>R</u>	Specific HL7 message type and event triggering the message.
09.1	Type	<u>R</u>	Value must = ‘ORU’ and must be sent by the source system
09.2	Event	<u>R</u>	See Chapter 5 ORU Trigger Events for allowable events.
10	Message Control ID	<u>R</u>	Unique. Initiator generated. Responder returns sender value in ACK message in MSA:2. With acknowledgment messages, MSH:10 value may be identical to original sender value or may be a new unique value assigned by acknowledging system.  To ProAccess: The Medicity ORU Parser will not reject a message when MSH:10 is not unique. However, non-unique values will hinder or limit troubleshooting options.

MSH Seq	Name	R/O	Comments
			Medicity requests the client to append date/time to the message control ID if it is not unique prior to sending the message to Medicity.
11	Processing ID	<u>O</u>	'P' = Production 'T' = Test
11.1	Processing ID	<u>O</u>	
11.2	Mode	<u>O</u>	
12	Version ID	<u>R</u>	HL7 version. Medicity currently transforms HL7 that is received to version '2.3'. Medicity can accept HL7 version 2.1 – 2.5. See section 8 Processing Performed by Medicity.
13	Sequence Number	<u>N</u>	
14	Continuation Number	<u>N</u>	
15	Accept ACK Type	<u>N</u>	
16	Application ACK Type	<u>N</u>	
17	Country Code	<u>N</u>	
18	Character Set	<u>N</u>	
19	Language of Message	<u>N</u>	

## 7.1.2 The MSA Segment—Message Acknowledgment Segment

The MSA segment is returned as part of MSH, MSA pair in the ACK message type.

### Segment Layout

MSA Seq.	Name	R/O	Comments
01	Acknowledge Code	<u>R</u>	Valid values: 'AA'=ACK=message stored 'AE' =NACK=message stored with error noted.
02	Message Control ID	<u>R</u>	Echo MSH segment control ID (MSH:10) of message being acknowledged.
03	Text Message	<u>N</u>	
04	Expected Sequence Number	<u>N</u>	
05	Delayed ACK Type	<u>N</u>	
06	Error Condition	<u>N</u>	

#### Original Message:

MSH|^~\&|MCITY|999|CITYCENTERHOSP|ProAccess|19960214134522||ORU^R01|A13345.78|P|2.2

#### Acknowledgement (Immediate Original Processing Rules):

MSH|^~\&|CITYCENTERHOSP|ProAccess|MCITY|999|19960214134530||ACK|A13345.78|P|2.2

MSA|AA|A13345.78

## 7.2 Person Segments

### 7.2.1 The PID Segment - Patient Identification

The PID segment identifies the person and usually the encounter associated with the message. Patient demographic information is also provided. ProAccess requires at least one primary Patient or Person Identifier.

#### Segment Layout

PID Seq.	Name	R/O	Comments
01	Set ID- PID	<u>O</u>	
02	External Patient ID	<u>O</u>	See Section 3.3.1 Patient Matching
02.1	Patient ID	<u>O</u>	
02.2	Check Digit	<u>N</u>	
02.3	Check Digit Scheme	<u>N</u>	
02.4	Assigning Authoring Identifier Type	<u>N</u>	
02.5		<u>N</u>	
03	Internal Patient ID	<u>R</u>	See Section 3.3.1 Patient Matching This is Medicity's MRN display value field. What is in this field is displayed as the MRN in the application. This entry is highly recommended for patient matching.
03.1	Patient ID	<u>R</u>	
03.2	Check Digit	<u>N</u>	
03.3	Check Digit Scheme	<u>N</u>	
03.4	Assigning Authoring Identifier Type	<u>N</u>	
03.5		<u>N</u>	
03.6	Assigning Facility	<u>N</u>	
04	Alternate Patient ID	<u>O</u>	See section 3.3.1 Patient Matching.
04.1	Patient ID	<u>O</u>	
04.2	Check Digit	<u>N</u>	
04.3	Check Digit Scheme	<u>N</u>	
04.4	Assigning Authoring Identifier Type	<u>N</u>	
04.5		<u>N</u>	
04.6	Assigning Facility	<u>N</u>	
05	Patient Name	<u>R</u>	Highly recommended to be part of patient matching rules.
05.1	Last Name	<u>R</u>	
05.2	First Name	<u>O</u>	
05.3	Middle Name	<u>O</u>	
05.4	Suffix	<u>O</u>	
05.5	Prefix	<u>O</u>	
05.6	Degree	<u>N</u>	

PID Seq.	Name	R/O	Comments
06	Mother's Maiden Name	<u>N</u>	
07	Date of Birth	<u>R</u>	Highly recommended to be part of patient matching rules.
08	Sex	<u>R</u>	See Codeset: CS_GENDER Highly recommended to be part of patient matching rules.
09	Patient Alias	<u>N</u>	
09.1	Last Name	<u>N</u>	
09.2	First Name	<u>N</u>	
09.3	Middle Name	<u>N</u>	
09.4	Suffix	<u>N</u>	
09.5	Prefix	<u>N</u>	
09.6	Degree	<u>N</u>	
10	Race	<u>O</u>	See Codeset: CS_RACE
11	Patient Address	<u>O</u>	See: Medicity Base Codeset
11.1	Address Line 1	<u>O</u>	
11.2	Address Line 2	<u>O</u>	
11.3	City	<u>O</u>	
11.4	State	<u>O</u>	
11.5	ZIP Code	<u>O</u>	
11.6	Country	<u>O</u>	
11.7	Type	<u>N</u>	
11.8	Other Geographic Designation	<u>N</u>	
11.9	County/Parish	<u>N</u>	
11.10	Census Tract	<u>N</u>	
12	County Code	<u>N</u>	
13	Home Phone Number	<u>O</u>	18 char limit Suggested format (999) 999-9999
14	Business Phone Number	<u>O</u>	18 char limit Suggested format (999) 999-9999
15	Language – Patient	<u>O</u>	
16	Marital Status	<u>O</u>	See Codeset: CS_MARITAL_STATUS
17	Religion	<u>O</u>	See Codeset: CS_RELIGION
18	Patient Account Number	<u>R</u>	See section 3.3.1 Patient Matching. Highly recommended to be part of patient matching rules.
18.1	Patient Account Number	<u>R</u>	
18.2	Check Digit	<u>N</u>	
18.3	Check Digit Scheme	<u>N</u>	
18.4	Assigning Authority	<u>N</u>	
18.5	Identifier Type	<u>N</u>	

PID Seq.	Name	R/O	Comments
18.6	Assigning Facility	<u>N</u>	
19	SSN – Patient	<u>O</u>	12 char limit Suggested format 999-99-9999
20	Driver's License Number	<u>N</u>	
21	Mother's Identifier	<u>N</u>	
22	Ethnic Group	<u>O</u>	See Codeset: CS_ETHNIC_GROUP
23	Birth Place	<u>O</u>	
24	Multiple Birth Indicator	<u>N</u>	
25	Birth Order	<u>N</u>	
26	Citizenship	<u>N</u>	
27	Veterans Military Status	<u>N</u>	
28	Nationality	<u>N</u>	
29	Patient Death Date/Time	<u>N</u>	
30	Patient Death Indicator	<u>N</u>	

## 7.2.2 The PV1 Segment – Patient Visit

The PV1 segment provides visit or encounter specific information. Medicity requires PV1 segment. Medicity will default to "O" if not sent.

### Segment Layout

PV1 Seq.	Name	R/O	Comments
01	Set ID- PV1	<u>R</u>	Starts at 1; increments by 1.
02	Patient Class	<u>R</u>	See Codeset: CS_ENCOUNTER_CLASS Required by Medicity to determine IP/OP status.
03	Patient Location	<u>O</u>	See Codeset: CS_LOC_NURSE_STATION
03.1	Point of Service Location	<u>O</u>	
03.2	Patient Room	<u>O</u>	
03.3	Patient Bed	<u>O</u>	
03.4	Facility ID	<u>O</u>	
03.5	Bed Status	<u>N</u>	
03.6	Location Type	<u>N</u>	
03.7	Building	<u>O</u>	
03.8	Floor	<u>N</u>	
04	Admission Type	<u>O</u>	See Codeset: CS_ADMIT_TYPE
05	Pre-Admit Number	<u>N</u>	
06	Prior Patient Location	<u>N</u>	
07	Attending Doctor	<u>O</u>	The value in this field can be used to determine result delivery routing to an end user. Medicity will not accept repeating fields for PV1:07 – only a single occurrence is allowed.

PV1 Seq.	Name	R/O	Comments
07.1	Attending Doctor ID	<u>R</u>	If sent, 07.1 and 07.2 are required.
07.2	Last Name	<u>R</u>	
07.3	First Name	<u>O</u>	
07.4	Middle Name	<u>O</u>	
07.5	Prefix	<u>O</u>	
07.6	Suffix	<u>O</u>	
07.7	Degree	<u>N</u>	
07.8	Source Table	<u>N</u>	
07.9	Assigning Authority	<u>N</u>	
07.10	Name Type	<u>N</u>	
07.11	Check Digit	<u>N</u>	
07.12	Check Digit Scheme	<u>N</u>	
07.13	Identifier Type	<u>N</u>	
08	Referring Doctor	<u>O</u>	The value in this field can be used to determine result delivery routing to an end user. Medicity will not accept repeating fields for PV1:08 – only a single occurrence is allowed.  If sent, 08.1 and 08.2 are required.
08.1	Referring Doctor ID	<u>R</u>	
08.2	Last Name	<u>R</u>	
08.3	First Name	<u>O</u>	
08.4	Middle Name	<u>O</u>	
08.5	Prefix	<u>O</u>	
08.6	Suffix	<u>O</u>	
08.7	Degree	<u>N</u>	
08.8	Source Table	<u>N</u>	
08.9	Assigning Authority	<u>N</u>	
08.10	Name Type	<u>N</u>	
08.11	Check Digit	<u>N</u>	
08.12	Check Digit Scheme	<u>N</u>	
08.13	Identifier Type	<u>N</u>	
09	Consulting Doctor	<u>O</u>	The value in this field can be used to determine result delivery routing to an end user. Medicity will accept repeating fields for PV1:09.  If sent, 09.1 and 09.2 are required.
09.1	Consulting Doctor ID	<u>R</u>	
09.2	Last Name	<u>R</u>	
09.3	First Name	<u>O</u>	
09.4	Middle Name	<u>O</u>	
09.5	Prefix	<u>O</u>	
09.6	Suffix	<u>O</u>	
09.7	Degree	<u>N</u>	
09.8	Source Table	<u>N</u>	

PV1 Seq.	Name	R/O	Comments
09.9	Assigning Authority	<u>N</u>	
09.10	Name Type	<u>N</u>	
09.11	Check Digit	<u>N</u>	
09.12	Check Digit Scheme	<u>N</u>	
09.13	Identifier Type	<u>N</u>	
10	Hospital Service	<u>Q</u>	See Codeset: CS_ADMIT_SERVICE
11	Temporary Location	<u>N</u>	
12	Pre-Admit Test Indicator	<u>N</u>	
13	Re-Admission Indicator	<u>N</u>	
14	Admission Source	<u>Q</u>	See Codeset: CS_ADMIT_SOURCE
15	Ambulatory Status	<u>N</u>	
16	VIP Indicator	<u>Q</u>	See Codeset: CS_VIP_IND
17	Admitting Doctor	<u>Q</u>	The value in this field can be used to determine result delivery routing to an end user. Medicity will not accept repeating fields for PV1:17 – only a single occurrence is allowed.
17.1	Admitting Doctor ID	<u>R</u>	If sent, 17.1 and 17.2 are required.
17.2	Last Name	<u>R</u>	
17.3	First Name	<u>Q</u>	
17.4	Middle Name	<u>Q</u>	
17.5	Prefix	<u>Q</u>	
17.6	Suffix	<u>Q</u>	
17.7	Degree	<u>N</u>	
17.8	Source Table	<u>N</u>	
17.9	Assigning Authority	<u>N</u>	
17.10	Name Type	<u>N</u>	
17.11	Check Digit	<u>N</u>	
17.12	Check Digit Scheme	<u>N</u>	
17.13	Identifier Type	<u>N</u>	
18	Patient Type	<u>Q</u>	See Codeset: CS_ENCOUNTER_TYPE
19	Visit Number	<u>Q</u>	See section 3.3.2 – Encounter or Visit Matching
20	Financial Class	<u>Q</u>	See Codeset: CS_FINANCIAL_CLASS
21	Charge Price Indicator	<u>N</u>	
22	Courtesy Code	<u>N</u>	
23	Credit Rating	<u>N</u>	
24	Contract Code	<u>N</u>	
25	Contract Effective Date	<u>N</u>	
26	Contract Amount	<u>N</u>	
27	Contract Period	<u>N</u>	
28	Interest Code	<u>N</u>	

PV1 Seq.	Name	R/O	Comments
29	Transfer to Bad Debt Code	<u>N</u>	
30	Transfer to Bad Debt Date	<u>N</u>	
31	Bad Debt Agency Code	<u>N</u>	
32	Bad Debt Transfer Amount	<u>N</u>	
33	Bad Debt Recover Amount	<u>N</u>	
34	Delete Account Indicator	<u>N</u>	
35	Delete Account Date	<u>N</u>	
36	Discharge Disposition	<u>O</u>	See Codeset: CS_DISCHARGE_DISPOSITION
37	Discharge To Location	<u>N</u>	
37.1	Code	<u>N</u>	
37.2	Description	<u>N</u>	
38	Diet Type	<u>N</u>	
39	Servicing Facility	<u>O</u>	See Codeset: CS_LOCATION_FACILITY All facilities within an organization must be populated. This field drives the report header facility graphic in ProAccess.
40	Bed Status	<u>N</u>	
41	Account Status	<u>N</u>	
42	Pending Location	<u>N</u>	
43	Prior Temporary Location	<u>N</u>	
44	Admit Date/Time	<u>R</u>	Medicity hard codes the value to 01/01/1900 if the admit date is not sent. This is done because ProAccess requires an admit date. This is typically performed in the results interfaces.
45	Discharge Date/Time	<u>C</u>	Once the patient has been discharged subsequent transactions after a discharge should have the discharge date and time included unless 'data preservation' has been configured for this interface
46	Current Patient Balance	<u>N</u>	
47	Total Charges	<u>N</u>	
48	Total Adjustment	<u>N</u>	
49	Total Payments	<u>N</u>	
50	Alternate Visit ID	<u>N</u>	
51	Visit Indicator	<u>N</u>	
52	Other Healthcare Providers	<u>N</u>	

## 7.3 Order Segments

### 7.3.1 The ORC Segment- Common Order

#### Segment Layout

ORC Seq.	Name	R/O	Comments
01	Order Control	<u>R</u>	
02	Placer Order Number	<u>R</u>	The [Vendor [Result Type] System] unique order number. See section 3.6 Result Matching
03	Filler Order Number	<u>O</u>	See section 3.6 Result Matching
04	Placer Group Number	<u>N</u>	
05	Order Status	<u>N</u>	
06	Response Flag	<u>N</u>	
07	Quantity/Timing	<u>N</u>	
7.1	Quantity	<u>N</u>	
7.2	Interval	<u>N</u>	
7.3	Duration	<u>N</u>	
7.4	Start Date	<u>N</u>	
7.5	End Date	<u>N</u>	
7.6	Priority	<u>N</u>	
08	Parent	<u>N</u>	
09	Date of Transaction	<u>N</u>	
10	Entered By	<u>N</u>	
11	Verified By	<u>N</u>	
12	Ordering Provider	<u>C</u>	If an ordering provider is provided in the OBR and in the ORC, the OBR value will be used The value in this field can be used to determine result delivery routing to an end user. Medicity will not accept repeating fields for ORC12 – only a single occurrence is allowed.
12.1	Identifier	<u>R</u>	If sent, 12.1 and 12.2 are required.
12.2	Last Name	<u>R</u>	
12.3	First Name	<u>O</u>	
12.4	Middle Name	<u>O</u>	
12.5	Prefix	<u>O</u>	
12.6	Suffix	<u>O</u>	
12.7	Degree	<u>N</u>	
13	Enterer's Location	<u>N</u>	
14	Call Back Phone Number	<u>N</u>	

ORC Seq.	Name	R/O	Comments
15	Order Effective Date	<u>N</u>	
16	Order Control Code Reason	<u>N</u>	
17	Entering Organization	<u>N</u>	
18	Entering Device	<u>N</u>	
19	Action By	<u>N</u>	

## 7.3.2 The OBR Segment – Order Detail

### Segment Layout

OBR Seq.	Name	R/O	Comments
01	Set ID- OBR	<u>R</u>	Set ID begins at 1 and increments by 1.
02	Placer Order Number	<u>R</u>	See section 3.6 Result Matching. This is a unique number for this given order.
03	Filler Order Number	<u>O</u>	See section 3.6 Result Matching. The accession number assigned to the group of results by [Vendor [Result Type] System]. Note: The accession number will be received from [Vendor [Result Type] System] only when the accession number has been assigned.
04	Universal Service ID	<u>R</u>	Field Length Database Limit = 50 Characters, display may be limited Field Length Database Limit = 200 Characters, display may be limited Strongly recommended by Medicity to be populated.
04.1	Test Code	<u>R</u>	
04.2	Test Description	<u>R</u>	
04.3	Coding System	<u>O</u>	
05	Priority	<u>N</u>	
06	Requested Date/Time	<u>R</u>	
07	Observation Date	<u>R</u>	
08	Observation End Date	<u>N</u>	
09	Collection Volume	<u>N</u>	
10	Collector Identifier	<u>N</u>	
11	Specimen Action Code	<u>N</u>	
12	Danger Code	<u>N</u>	
12.1	Danger Code	<u>N</u>	
12.2	Danger Text	<u>N</u>	
13	Relevant Clinical Information	<u>N</u>	
14	Specimen Received Date	<u>N</u>	
15	Specimen Source	<u>N</u>	
15.1	Source Code	<u>N</u>	
15.1.1	Code	<u>N</u>	

OBR Seq.	Name	R/O	Comments
15.1.2	Description	<u>N</u>	
15.2	Additives	<u>N</u>	
15.3	Free Text	<u>N</u>	
15.4	Body Site	<u>N</u>	
15.4.1	Code	<u>N</u>	
15.4.2	Description	<u>N</u>	
16	Ordering Provider	<u>C</u>	If an ordering provider is provided in the OBR and in the ORC, the OBR value will be used The value in this field can be used to determine result delivery routing to an end user. Medicity will not accept repeating fields for OBR16 – only a single occurrence is allowed. If sent, 16.1 and 16.2 are required.
16.1	Identifier	<u>R</u>	
16.2	Last Name	<u>R</u>	
16.3	First Name	<u>O</u>	
16.4	Middle Name	<u>O</u>	
16.5	Prefix	<u>O</u>	
16.6	Suffix	<u>O</u>	
16.7	Degree	<u>N</u>	
17	Order Call Back Phone Number	<u>N</u>	
18	Placer Field 1	<u>O</u>	See section 3.6 Result Matching.
19	Placer Field 2	<u>N</u>	
20	Filler Field 1	<u>R</u>	See section 3.6 Result Matching.
21	Filler Field 2	<u>N</u>	
22	Result Report Change Date	<u>O</u>	Strongly recommended by Medicity to be populated.
23	Charge to Practice	<u>N</u>	
24	Diagnostic Service Section ID	<u>R</u>	See Codeset: CS_DIAGNOSTIC_SERVICE_SECTION
25	Result Status	<u>R</u>	See Codeset: CS_RESULT_STATUS
26	Parent Order ID	<u>N</u>	
27	Quantity Timing	<u>O</u>	
27.1	Quantity	<u>O</u>	
27.2	Interval	<u>O</u>	
27.3	Duration	<u>O</u>	
27.4	Start Date	<u>O</u>	
27.5	End Date	<u>O</u>	
27.6	Priority	<u>O</u>	
28	Result Copies To	<u>O</u>	The value in this field can be used to determine result delivery routing to an end user. Medicity will accept repeating fields for OBR:28 and display multiple copy-to-docs on a report.

OBR Seq.	Name	R/O	Comments
28.1	Identifier	<u>R</u>	If sent, 28.1 and 28.2 are required.
28.2	Last Name	<u>R</u>	
28.3	First Name	<u>O</u>	
28.4	Middle Name	<u>O</u>	
28.5	Prefix	<u>O</u>	
28.6	Suffix	<u>O</u>	
28.7	Degree	<u>N</u>	
29	Parent Accession Number	<u>N</u>	
30	Transportation Mode	<u>N</u>	
31	Reason For Study	<u>N</u>	
31.1	Reason ID	<u>N</u>	
31.2	Reason Text	<u>N</u>	
32	Main Result Interpreter	<u>R</u>	The value in this field can be used to determine result delivery routing to an end user. Medicity will not accept repeating fields for OBR32 – only a single occurrence is allowed.  If sent, 32.1 and 32.2 are required.  Displayed as the Dictating Physician in ProAccess and also used for eSignature.
32.1	Identifier	<u>R</u>	
32.2	Last Name	<u>R</u>	
32.3	First Name	<u>O</u>	
32.4	Middle Name	<u>O</u>	
32.5	Prefix	<u>O</u>	
32.6	Suffix	<u>O</u>	
32.7	Degree	<u>N</u>	
33	Assist Result Interpreter	<u>N</u>	
34	Technician	<u>N</u>	
35	Transcriptionist	<u>N</u>	
35.1	Identifier	<u>N</u>	
35.2	Last Name	<u>N</u>	
35.3	First Name	<u>N</u>	
35.4	Middle Name	<u>N</u>	
35.5	Prefix	<u>N</u>	
35.6	Suffix	<u>N</u>	
35.7	Degree	<u>N</u>	
36	Scheduled Date/Time	<u>N</u>	
37	Number of Containers	<u>N</u>	
38	Transport Logistics of Specimen	<u>N</u>	
39	Collector's Comments	<u>N</u>	
40	Transport Arrangement Responsibility	<u>N</u>	

OBR Seq.	Name	R/O	Comments
41	Transport Arranged	<u>N</u>	
42	Escort Required	<u>N</u>	
43	Planned Patient Transport Comment	<u>N</u>	

### 7.3.3 The NTE Segment - Order Comments

The NTE segment is used to send textual comments. The Medicity interface will accept comments as multiple NTE segments in which each NTE segment represents a hard carriage return or a new line. The Universal Interface will also accept comments as a single NTE segment in which each instance of the Comment (NTE:3) field separated by the repeat delimiter represents a new line.

**Note:** NTE comments are not supported in this interface type.

#### Segment Layout

NTE Seq.	Name	R/O	Comments
01	Set ID – NTE	<u>R</u>	
02	Source of Comment	<u>R</u>	Note: If a value other than those listed below is sent by the source system, a custom processing requirement must be defined to transform the source system value to a Medicity required value: O = Order – When sent immediately after an OBR segment A = Accession level – When sent immediately after an OBR segment
03	Comment	<u>O</u>	Some NTE segments are sent with blank comments to maintain carriage return/blank line separation. Medicity processes a blank comment as a carriage return.

### 7.3.4 The OBX Segment - Observation/Result

The OBX segment contains clinical observation reporting for results and orders.

OBX Seq.	Name	R/O	Comments
01	Set ID- OBX	<u>R</u>	
02	Value Type	<u>R</u>	Allowable Fields: TX – Text
03	Observation Identifier	<u>R</u>	
03.1	Test Code	<u>R</u>	
03.2	Test Code Description	<u>R</u>	
03.3	Coding Scheme	<u>O</u>	Preferred
04	Observation Sub-ID	<u>N</u>	
05	Observation Value	<u>C</u>	

OBX Seq.	Name	R/O	Comments
06	Units	<u>N</u>	
07	Reference Range	<u>N</u>	
08	Abnormal Flags	<u>N</u>	
09	Probability	<u>N</u>	
10	Nature of Abnormal Test	<u>N</u>	
11	Observation Result Status	<u>O</u>	See Codeset: CS_RESULT_STATUS
12	Date Last Observe Normal Values	<u>N</u>	
13	User Access Checks	<u>N</u>	
14	Date/Time of the Observation	<u>O</u>	
15	Producer's ID	<u>O</u>	Field length database limit = 50 characters, display may be limited Field length database limit = 200 characters, display may be limited Strongly recommended by Medicity to be populated.
15.1	Producer's ID Code	<u>C</u>	
15.2	Producer's ID Description	<u>C</u>	
15.3	Producer's ID Coding System	<u>O</u>	
16	Responsible Observer	<u>O</u>	If sent, 16.1 and 16.2 are required.
16.1	Identifier	<u>R</u>	
16.2	Last Name	<u>R</u>	
16.3	First Name	<u>O</u>	
16.4	Middle Name	<u>O</u>	
16.5	Prefix	<u>O</u>	
16.6	Suffix	<u>O</u>	
16.7	Degree	<u>N</u>	
17	Observation Method	<u>N</u>	

## 8 Processing Performed by Medicity

### 8.1 Generic Processing

This interface will utilize the Generic Transformer for the following processing.

#### 8.1.1 Global

All of the processing documented in this table will be configured in the Global Transformations section of the Generic Transformation. The processing will be completed in the order in which it is documented in this table.

Field #	Issue	Custom Processing Required	Pre-validation Rule
MSH:04	Medicity requires the organization reference value in MSH:04.	MSH:04 processing.	
MSH:03	Medicity requires the contributing system value in MSH:03.	Medicity will transform MSH:03 as follows: MSH:03 = MSH:04 + TRANS	
MSH:05	Medicity requires MSH:05 be populated with ProAccess.	Medicity will hardcode MSH:05 to "ProAccess".	
MSH:12		Medicity will hardcode MSH:12 to "2.3".	

#### 8.1.2 Contributing System

All of the processing documented in this table will be configured in the Contributing System Transformations section of the Generic Transformation. The processing will be completed in the order in which it is documented in this table.

Field #	Issue	Custom Processing Required	Pre-validation Rule

### 8.2 Custom Processing

Any processing detailed after this point will require the creation of a custom transformer.

Field #	Issue	Custom Processing Required	Pre-validation Rule