



**Medi-EMR External
EDI Specifications**

**For the Medi-EMR
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1 PREFACE

1.1 Introduction

This document provides instructions for the development and management of an external clinical interface to support Electronic Data Interchange (EDI) between the Lab interface and Medi-EMR.

1.2 Document Composition

This document begins by introducing some required terminology commonly used at Medi-EMR. Next is a basic discussion of connectivity. Finally, we will see how the Result [ORU] type messages handled in Medi-EMR with examples.

1.3 Health Level Seven (HL7)

An American National Standards Institute (ANSI) accredited committee whose primary goal is to provide standards for the exchange of data among healthcare computer applications. This eliminates or substantially reduces the custom interface programming and program maintenance that may otherwise be required.

1.4 Disclaimer

This document contains the latest version of Medi-EMR's External HL7 interface implementation specification. Due to the changing needs of the reference the contents of this document are subject to change at any time, without warning or prior notification. Please contact our Support Department to obtain a current copy of the Medi-EMR External EDI Specifications guide.

2 COMMUNICATIONS

2.1 Connecting to MEDI-EMR

The SFTP methods supported by MEDI-EMR to connect. Medi-EMR will work with the Lab client and the vendor supplying the interface to determine the connection method that best meets the interface requirements.

2.2 SFTP

The SSH File Transfer Protocol (SFTP) is used to transfer files over a cryptographically protected Secure Shell (SSH) connection.

- ^ SSH File Transfer Protocol, a network protocol for secure file transfer over secure shell
- ^ Secure file transfer program, a true SSH File Transfer Protocol client from the Open SSH project
- ^ FTP over SSH, the practice of tunneling a File Transfer Protocol session over SSH
- ^ Simple File Transfer Protocol, an unsecured and rarely used file transfer protocol from the early days of the Internet

"Medi-EMR" Provides the SFTP credential details during the interface implementation, according to the Lab interfaces for testing and Production result files.

Medi-EMR Information

3 MEDI-EMR INFORMATION

Following Fields are required for Result type (ORU) messages to process the HL7 messages into mediemr system.

'R' – This field is always needed for the [ORU] results.

Field Identifier	Field Description	Required Field?	Comments
MSH-3	Sending Application	R	
MSH-4	Sending Facility (Client Site ID)	R	
PID-5.1	Patient Last Name	R	
PID-5.2	Patient First Name	R	
PID-7	Patient Date of Birth <ul style="list-style-type: none"> • Numeric Characters • Format: YYYYMMDD 	R	
PID-8	Patient Gender <ul style="list-style-type: none"> • 'M' – Male • 'F' – Female • 'N' – Not Indicated 	R	
PID-18.1	Client's account number	R	
ORC-12.1 or OBR-16.1	Ordering Provider ID Number	R	
ORC-12.2 or OBR-16.2	Ordering Provider Last Name	R	
ORC-12.3 or OBR-16.3	Ordering Provider First Initial	R	
OBR-4	Universal Service ID	R	It's required only if the result type is Radiology.
OBX-2	Value Type Use: To identify types of data being sent <ul style="list-style-type: none"> • 'NM' – Numeric • 'ST' – String Data • 'TX' – Text • 'ED' – Encapsulated Data (Embedded Base64 encrypted PDF file to follow in OBX) 	R	
OBX-5	<ul style="list-style-type: none"> • Alpha, Numeric, or Special Characters • Actual Base64 encrypted PDF file in 50K blocks. 	R	

Result Message Format

4 RESULT MESSAGE

4.1 Result Message (ORU)

The following table lists all of the segments used in a result message -

Field Identifier	Field Description
MSH	Message Header
PID	Patient Identification
ORC	Common Order
OBR	Observation Request
OBX	Observation Result (Observations / Encapsulated Data)
NTE	Notes and Comments (can be after PID, OBR, and OBX)

4.2 Sample Result Message

```
MSH|^~\&|LAB|ABC1|MEDIEMR|ME999999|201309010042||ORU|20130901004212|P|2.3
PID|1|99999999|99999999|999999998|LNAME^FNAME^MIDDLE||19600505|M|||11 MAIN
STREET^^TOWN^NJ^ 11111-9999||((555)666-7777|)|||99999999^^^N|999008888
ORC|RE|L2435^LAB|9999999999^LAB|201309010042|||
NPI_Number^LastName^FirstName^Middle^^^^NPI
OBR|1|L2435^LAB|6777463-0^LAB|014790^VITAMIN C^L|||19961002122600|^^^SICK
|201309010042||NPI_Number^LastName^FirstName^Middle^^^^NPI |||||201309010042|||F
NTE|1|AC|NTE segments can be attached to PID OBR and OBX
OBX|1|ST|014790^Vitamin C^L||1.5|mg/dL|0.4-2.0||N|F|20130901||201309010042|01
NTE|1|RC|Greater than 100,000 colony forming units per mL
```


4.4 Sample Radiology Result Message

Sample format-1

MSH|^~\&|LAB|ABC1|MEDIEMR|ME999999|201309010042||ORU|20130901004212|P|2.3
PID|1|99999999|99999999|999999998|LNAME^FNAME^MIDDLE||19480301|M||11 MAIN
STREET^^TOWN^NJ^ 11111-9999||((555)666-7777|99999999^^^N|999008888
ORC|RE|20130901|20130901|||201309010042||
NPI_Number^LastName^FirstName^Middle^^^^NPI|||||
OBR|1|20130901|20130901|XRAP^XR Hip Right/Ap Pelvic||201309010042|||201309010042||
NPI_Number^LastName^FirstName^Middle^^^^NPI||||20130901004212|||
OBX|1|TX||THOMAS MOORE, MD|||||
OBX|2|TX||90 Washington|||||
OBX|3|TX||Bedminster, NJ 07921|||||
OBX|4|TX|| Patient Name: TEST, PATIENT|||||
OBX|5|TX|| Date of Birth: 01/30/1948|||||
OBX|6|TX|| Age/Sex: 64/Male|||||
OBX|7|TX|| Identification#: 1111111|||||
OBX|8|TX|| Accession: 9999999|||||
OBX|9|TX|| Exam Date: 08/21/2013|||||
OBX|10|TX|||||||
OBX|11|TX||Dear Dr. Moore,|||||
OBX|12|TX|||||||
OBX|13|TX||EXAM(S): RADIOGRAPHS RIGHT HIP|||||
OBX|14|TX||EXAM: RADIOGRAPH PELVIS|||||
OBX|15|TX|||||||
OBX|16|TX||An AP view of the pelvis and both hips in neutral position was obtained|||||
OBX|17|TX||with a|||||
OBX|18|TX||frog-lateral view of the right hip only. The patient is a 64-year-old|||||
OBX|19|TX||male, right hip|||||
OBX|20|TX||pain.|||||
OBX|21|TX||The bones are of normal density. There is no sign of fracture, and no|||||
OBX|22|TX||blastic or|||||
OBX|23|TX||lytic changes are seen. Both sacroiliac joints appear normal and|||||
OBX|24|TX||symmetrical. There|||||
OBX|25|TX||is moderate osteoarthritis of the right hip, with marked narrowing of|||||
OBX|26|TX||the superior|||||
OBX|27|TX||joint space and subchondral sclerosis. The left hip is relatively|||||
OBX|28|TX||preserved. There is|||||
OBX|29|TX||Thank you for referring this patient.|||||
OBX|30|TX||Electronically Signed By: Mary Levasseur, MD 08/23/2013 07:24:28|||||

Sample format-2

MSH|^~\&|LAB|ABC1|MEDIEMR|ME999999|201309010042||ORU|20130901004212|P|2.3
 PID|1|99999999|99999999|999999998|LNAME^FNAME^MIDDLE||19480301|F|||11 MAIN
 STREET^^TOWN^NJ^ 11111-9999||(555)666-7777|||99999999^^^N|999008888
 ORC|RE|20130901|20130901|||201309010042||
NPI_Number^LastName^FirstName^Middle^^^NPI|||||
 OBR|1|20130901|20130901|**SCREENING BILATERAL MAMMOGRAM WITH CORRELATING BILATERAL
 BREAST ULTRASOUND**||201309010042|||201309010042||
NPI_Number^LastName^FirstName^Middle^^^NPI|||||20130901004212|
 OBX|1||1||THOMAS MOORE, MD
 OBX|1||2|| 90 Washington Arthur Ave
 OBX|1||3||Bedminster, NJ 07921
 OBX|1||4||
 OBX|1||5||Patient Name: TEST, PATIENT DOB: 03/01/1948
 OBX|1||6||MR#: 209273 SERVICE DATE: 08/21/2013
 OBX|1||7||Accession: 9999999 Exam Date: 08/21/2013
 OBX|1||8||SCREENING BILATERAL MAMMOGRAM WITH CORRELATING BILATERAL BREAST ULTRASOUND
 OBX|1||9||CLINICAL STATEMENT: Routine screening. There is no family history of breast
 OBX|1||10||cancer. The patient states that last clinical breast examination was
 OBX|1||11||performed in 2012.
 OBX|1||12||
 OBX|1||13||COMPARISON: Comparison is made with multiple studies dating back to
 OBX|1||14||12/18/06.
 OBX|1||15||
 OBX|1||16||TECHNIQUE: Full-field digital bilateral mammography was performed in the
 OBX|1||17||craniocaudal and oblique mediolateral projections with computerized
 OBX|1||18||manipulation and computer aided detection (iCAD 7.2). Bilateral breast
 OBX|1||19||ultrasound was obtained.
 OBX|1||20||
 OBX|1||21||FINDINGS: The breasts are almost entirely fat (less than 25% glandular).
 OBX|1||22||The scattered fibroglandular elements are essentially unchanged in density
 OBX|1||23||and configuration when compared with prior studies. The biopsy clip in the
 OBX|1||24||lateral left breast is also unchanged in position. There is no evidence of
 OBX|1||25||a dominant mass or pathological architectural distortion. There are no
 OBX|1||26||suspicious microcalcifications, areas of pathologic skin thickening or
 OBX|1||27||nipple retraction.
 OBX|1||28||
 OBX|1||29||Bilateral breast ultrasound demonstrates no masses or cysts and no
 OBX|1||30||sonographic regions of architectural distortion. Targeted sonographic
 OBX|1||31||interrogation of the region of marked abnormality reveals sonographically
 OBX|1||32||normal-appearing breast parenchyma.
 OBX|1||33||
 OBX|1||34||IMPRESSION: STABLE PARENCHYMAL PATTERN WITH NO MAMMOGRAPHIC OR SONOGRAPHIC
 OBX|1||35||EVIDENCE OF MALIGNANCY AND NO MAMMOGRAPHIC OR SONOGRAPHIC ABNORMALITIES
 OBX|1||36||CORRESPONDING TO THE REPORTED REGION OF PALPABLE ABNORMALITY. PALPABLE

OBX|1||37||ABNORMALITY LIKELY CORRESPONDS TO A CORD OF NORMAL BREAST TISSUE. PLEASE
OBX|1||38||NOTE, PALPABLE ABNORMALITY SHOULD BE CAREFULLY EVALUATED CLINICALLY,
OBX|1||39||INDEPENDENT OF THE IMAGING FINDINGS.
OBX|1||40||
OBX|1||41||ACR CATEGORY 2: BENIGN FINDING(S). NO EVIDENCE OF MALIGNANCY.
OBX|1||42||
OBX|1||43||
OBX|1||44||As per regulatory requirement (MQSA), your patient will be sent a
OBX|1||45||bi-lingual report (in layman's terms) regarding this exam.
OBX|1||46||Thank you for the courtesy of this referral.
OBX|1||47||Electronically Signed - Mary Levasseur, MD