MISSISSIPPI STATE DEPARTMENT OF HEALTH

Electronic Laboratory Reporting Implementation Guide

Version 4.0
September 2014

Table of Contents

Introduction

This document serves as the Mississippi State Department of Health's (MSDH) Electronic Laboratory Reporting (ELR) Implementation Guide. The purpose of this document is to define how findings of reportable laboratory results should be communicated electronically to MSDH by hospital and reference laboratories (and other health care providers). This guide provides detail on how facilities will begin the On-Boarding process with a Kickoff call, structure HL7 content, validate data, receive data certification, and receive data re-certification. This guide provides information about the public health requirement of electronic transmission of laboratory results, but can also be used by facilities who wish to report laboratory results electronically without the objective to meet Meaningful Use.

The ELR objective requirement is to demonstrate the capability to submit electronic reportable laboratory results to public health agencies, except where prohibited, and in accordance with applicable law and practice. This objective will be measured by the successful ongoing submission of electronic reportable laboratory results from Certified EHR Technology to a public health agency for the entire EHR reporting period.[1]

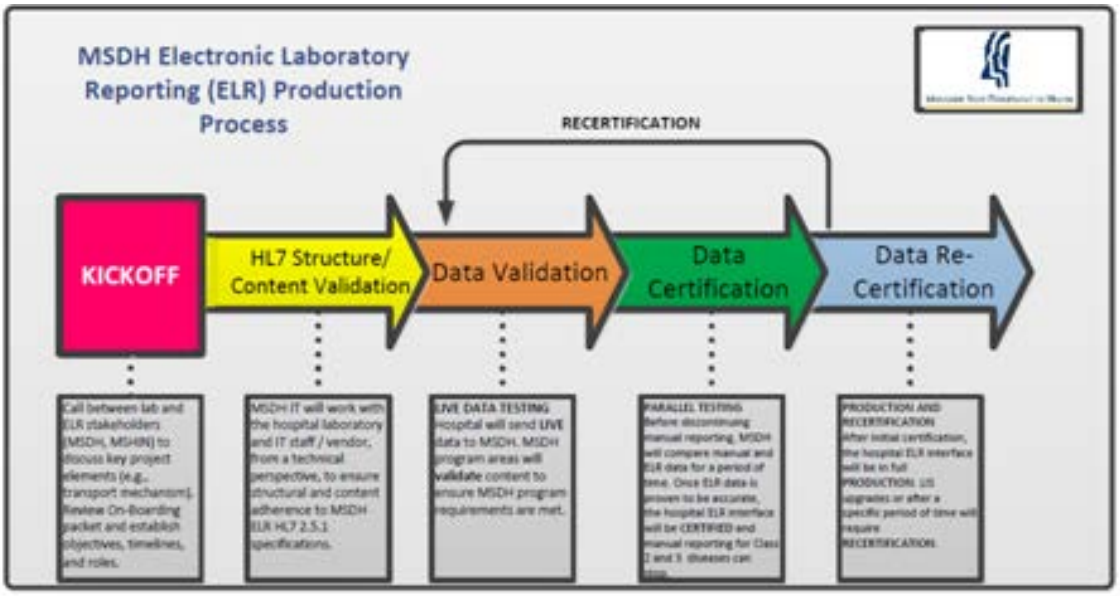
MSDH works with the state health information exchange (the Mississippi Health Information Network- MS-HIN) to provide transport solutions for reporting public health data. MSDH has also designated MS-HIN the ability to satisfy Meaningful Use criteria for ELR transmissions. MS-HIN provides real time standards-based interfaces, as well as Direct secure messaging as transport solutions. Once a laboratory's readiness has been determined, MS-HIN staff will work closely with MSDH to determine the transport solution and implementation timeline.

On-Boarding Process – Stage 2

Sending production level electronic lab reports

At the end of this section you will know how to start and complete the MSDH Electronic Laboratory Reporting process.

1. **Kick-off**
   - Call with MSDH ELR and MS-HIN Staff
2. **HL7 Structure/Content Validation**
   - Formatting and Understanding each HL7 segment
   - Identify National and Mississippi required fields
   - Translate/Map your facility's local codes to standardized PHIN VADS, LOINC® (LN), and SNOMED® (SCT) codes. This is the facility's responsibility.
3. **Data Validation**
   - Send production data in HL7 format through the whole process
4. **Data Certification**
   - Parallel testing
   - Send production level data both manually and electronically for at least four weeks.



To begin the On-Boarding Process: Stage 2 for ELRs, complete the following instructions

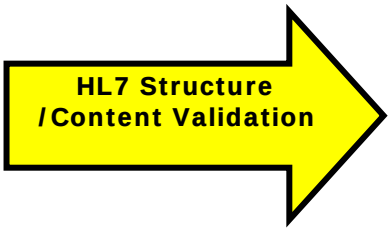
KICKOFF

KICKOFF CALL

Call between lab and ELR stakeholders (MSDH, MS-HIN) to discuss key project elements (e.g., transport mechanism, review On-Boarding packet and establish objectives, timelines, and roles.

All Participants

- MSDH has designated MS-HIN the ability to satisfy Meaningful Use criteria for ELR transmissions.
- Lab results can be sent electronically in either real-time (individual messages) or batch (multiple messages in one file) to the MS-HIN and subsequently forwarded to MSDH in a timely manner.
- Please contact your MS-HIN representative to establish ELR for your laboratory.



HL7 Structure/ Content Validation

MSDH Staff will work with the facility laboratory and IT staff/vendor, from a technical perspective, to ensure structural and content adherence to MSDH ELR HL7 2.5.1 specifications.

ELR Formatting

Each line of an ELR has the following Format:

<A Segment Name>|Text11^Text12^Text13|Text 21|^Test32^^^Test35|

A Segment Name can be:

- **MSH:** provide information about the reporting laboratory
- **SFT:** provide information about the software
- **PID:** provide information about the patient
- **NK1**: provide information about the next of kin
- **PV1**: provide information about the patient's visit
- **ORC:** provide information about the ordering facility
- **OBR:** provide information about the lab report
- **OBX:** provide information about an observation done
- **SPM:** provide information about a specimen done

After the segment name you see many | and ^. They are used as delimiters for fields. The first | marks the beginning of the Field 1 of a segment. The next | marks the end of the Field 1 and the beginning of the Field 2 and so on. Inside each field, you will see a ^ and the first one marks the end of subfield 1 and the beginning of the subfield 2.

Identify National and Mississippi Required Fields

The following HL7 format fields are required by either the national level or by the state of Mississippi. Your facility has to adhere to All Required Fields (Column 4).

1st Column	**Name of Field**
2nd Column	**Possible example of what might be in the field**
3rd Column	**Segment**
4th Column	**The field number**
5th Column	**R=Required**
	RE=Required, but can be empty
	P=Preferred by MSDH to help with Public Health

MSH

Field Separator	(|)	MSH	1	R
Encoding Characters	(^,&, ~, /)	MSH	2	R
Sending Application	LIMS	MSH	3	R
Sending Facility Namespace	Hosp. Name	MSH	4.1	R
Sending Facility Univ. ID	CLIA #	MSH	4.2	R
Sending Facility Univ. ID Type	"CLIA"	MSH	4.3	R
Receiving Application	MSDH-ELR	MSH	5	R
Receiving Facility	MSDOH	MSH	6	R
Date/Time of Message	Date	MSH	7	R
Message Type	ORU	MSH	9.1	R
Message Type	R01	MSH	9.2	R
Message Type	ORU_RO1	MSH	9.3	R
Message Control ID	(NM)	MSH	10	R
Processing ID	(D, T, P)	MSH	11	R
Version ID	(2.5.1)	MSH	12	R
Message Profile Identifier		MSH	21	R

SFT

Software Vendor Organization	Name	SFT	1	R
Software Certified Version (Number)	Number	SFT	2	R
Software Product Name	Name	SFT	3	R
Software Binary ID	110110101	SFT	4	R
Software Install Date **(RE)**	Date	SFT	6	**RE**

PID

Set ID-PID	(Usually "1")	PID	1	R
Patient Identifier List	MRN, SSN…	PID	3	R
Patient Last name		PID	5.1	R
Patient First name		PID	5.2	R
Patient Middle Initial		PID	5.3	P
Patient Name Suffix		PID	5.4	P
Patient's Date of Birth		PID	7.1	R
Patient's Sex	M,F,U	PID	8	R
Race of Patient (Code)	PHIN-VADS	PID	10.1	R
Race of Patient (Description)	Text	PID	10.2	R
Street Address1 of Patient		PID	11.1	R
Patient Address Line 2		PID	11.2	P

City Address of Patient		PID	11.3	R
State Address of Patient		PID	11.4	R
Zip Code Address of Patient		PID	11.5	R
Country Address of Patient		PID	11.6	P
County Address of Patient	PHIN-VADS	PID	11.9	R
Home Phone (Area Code)		PID	13.6	P
Home Phone (Number)		PID	13.7	P
Ethnic Group Identifier	N,H…	PID	22.1	P
Ethnic Group Description	Text	PID	22.2	P
Name of Coding System	HL70189	PID	22.3	P
Birthplace		PID	23	P
Citizenship		PID	26	P
Species Code **(RE)**		PID	35	**RE**

NK1

Set ID - NK1	Usually "1"	NK1	1	R
Next of Kin Last Name		NK1	2.1	P
Next of Kin First Name		NK1	2.2	P
Contact Person's Address		NK1	32	**RE**

PV1

Set ID - PV1	Usually "1"	PV1	1	R
Patient Class	I, O	PV1	2	R
Discharge Date/Time		PV1	45	**RE**

ORC

Order Control	"RE"	ORC	1	R
Filler Order Number	Source Lab	ORC	3	R
Ordering Facility Name		ORC	21	R
Ordering Facility Street Address		ORC	22.1	R
Ordering Facility City		ORC	22.3	R
Ordering Facility State		ORC	22.4	R
Ordering Facility Zip		ORC	22.5	R
Ordering Facility Country		ORC	22.6	R
Ordering Facility Area Code		ORC	23.6	R
Ordering Facility Phone Number		ORC	23.7	R
Ordering Provider Address **(RE)**		ORC	24	**RE/P**

OBR

Set ID-OBR	Usually "1"	OBR	1	R
Filler Order Number	Source Lab	OBR	3	R
Universal Service Identifier (Test)	LOINC	OBR	4.1	R
Description of Test	Description	OBR	4.2	R
Coding System (LN)	LN	OBR	4.3	R
Observation Date/Time	Date	OBR	7	R
Provider Last Name	Name	OBR	16.2	R
Provider First Name	Name	OBR	16.3	R
Order Callback Area Code		OBR	17.6	P
Order Callback Phone Number		OBR	17.7	P
Results Rpt/Status Chng- Date/Time	Date	OBR	22	R
Result Status	F, C or X	OBR	25	R
Reason for Study Identifier	PHIN-VADS	OBR	31.1	P
Description	Description	OBR	31.2	P
Coding System	OID	OBR	31.3	P
Principle Result Interpreter **(RE)**		OBR	32	**RE**
Procedure Code		OBR	44	P

OBX

Set ID- OBX	(1,2,3…)	OBX	1	R
Value Type	CE,SN,NM,CWE	OBX	2	R
Observation Identifier (Test)	LOINC	OBX	3.1	R
Description	Description	OBX	3.2	R
Coding System	LN	OBX	3.3	R
Result Code (Result)	SNOMED	OBX	5.1	R
Result Description (Text)	Description	OBX	5.2	R
Result Coding System	SCT	OBX	5.3	R
Result Units (where applicable)		OBX	6	R
References Range	Result	OBX	7	P
Observation Result Status	F, W	OBX	11	R
Performing Organization Name	Source Lab	OBX	23.1	R
Performing Organization ID	CLIA #	OBX	23.10	R
PO Street Address		OBX	24.1	R
Performing Organization City		OBX	24.3	R
Performing Organization State		OBX	24.4	R
Performing Organization Zip		OBX	24.5	R
Performing Organization Country		OBX	24.6	R
PO Medical Director **(RE)**		OBX	25	**RE**

SPM

Set ID- SPM		SPM	1	R
Specimen ID	Accession #	SPM	2	R
Specimen Type - Identifier	SNOMED	SPM	4.1	R
Specimen Type - Text	Description	SPM	4.2	R
Name of Coding System	SCT	SPM	4.3	R
Specimen Additives		SPM	6	P
Specimen Collection Method		SPM	7	P
Specimen Collection Site	Loc. on Body	SPM	10	P
Specimen Collection Date/Time		SPM	17	R
Specimen Received Date/Time		SPM	18	R
Specimen Reject Reason **(RE)**		SPM	21	**RE**

NTE

Census Tract		NTE		P
Patient's Country of Residence		NTE		P
Patient's Age		NTE		P
Patient's Place of Birth		NTE		P
Final DX		NTE		P
Dept. of Corrections ID		NTE		P
Clinical History		NTE		P

Translation of local codes to standardized codes

Every facility in MS has their own local codes when it comes to identifying patient identifiers, types of tests, types of results, etc. To be consistent and to standardize, the state requires the use of PHIN VADS, LOINC® and SNOMED® codes.

PHIN VADS is the standardized vocabulary for patient identifiers. LOINC® are the standard codes for the laboratory tests. SNOMED® are the standard codes for the laboratory results, specimen type, and specimen site. Both the facility and vendor need to work together to translate/map the locals codes to standard codes. Welcome to the universal medical language!

Reference Laboratories and Coding

The sending facility is responsible for ensuring that the reference laboratory results that will be sent to MSDH contain LOINC®, SNOMED® and PHIN VADS codes within the ELRs.

PHIN VADS: Standard Patient Identifier Codes

	Concept Code	Concept Name
Sex	A	Ambiguous
	F	Female
	M	Male
	N	Not applicable
	O	Other
	U	Unknown
Race	1002-5	American Indian or Alaska Native
	2028-9	Asian
	2054-5	Black or African American
	2076-8	Native Hawaiian or Other Pacific Islander
	2131-1	Other Race
	2106-3	White
Ethnicity	H (or 2135-2)	Hispanic or Latino
	N (or 2186-5)	Not Hispanic or Latino
	U	Unknown

Numerous codes are being translated to standardized codes for consistent terminology. For example, when race is entered into the system, it needs to be in a standard code form so that it can correctly be read by the receiving system. The lists above cover codes for race, ethnicity, and sex. Here is an excerpt of sex, race, and ethnicity codes highlighted:

PID example

PID|1||36363636^^^MPI&2.16.840.1.113883.19.3.2.1&ISO^MR^A&2.16.840.1.113883.19.3.2.1&ISO~444333333^^^&2.16.840.1.113883.4.1^ISO^SS||Everyman^Adam^A^^^^L^^^^^^^BS|Mum^Martha^M^^^^M|19800602|M||2106-3^White^CDCREC^^^^04/24/2007|2222 HomeStreet^^AnnArbor^MI^99999^USA^^^28049||^PRN^PH^^1^555^5552004|^WPN^PH^^1^955^5551009|eng^English^ISO6392^^^^3/29/2007|M^Married^HL70002^^^^2.5.1||||||N^Not Hispanic or Latino^HL70189^^^^2.5.1|||||||N|||200808151000-0700|Reliable^2.16.840.1.113883.19.3.1^ISO

Translate / Map the facility's local codes to the PHIN VADS, standardized patient identifier codes.

See the following links for more details regarding PHIN VADS.

Link to PHIN VADS lookup web site — PHIN VADS Codes Look-up Web Site
Link to MSDH PHIN VADS Spreadsheet — MSDH PHIN VAD spreadsheet

LOINC®
Logical Observation Identifiers Names and Codes

LOINC® (LN): Standardized Test Type CODES

The purpose of the LOINC® database is to facilitate the exchange and pooling of results for clinical care, outcomes management, and research. Currently, most laboratories and clinical services use HL7 to send their results electronically from their reporting systems to their care systems. However, the tests in these messages are identified by means of their internal, idiosyncratic code values. Thus, the care system cannot fully "understand" and properly file the results they receive unless they either adopt the producer's laboratory codes (which is impossible if they receive results from multiple sources), or invest in the work to map each result producer's code system to their internal code system. LOINC® codes are universal identifiers for laboratory and other clinical observations that solve this problem. ([1])

Test	***Your facility's local test codes***	***LOINC® CODE (LN)***
Stool Culture	*STCX*	***625-4***

Translate / Map the facility's local codes to the LOINC®, standardized test codes.

LOINC® "OBX 3.1" Example:

OBX|1|CE|625-4^Bacteria identified in Stool Culture^LN|1|||372342007|1^^UCUM^^^^1.6^^s/coratio|0.0-0.9|H~POS|||F|||200808151030-0700|||||200808181800-0700||||GHH\Lab^L^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^1236|3434 Industrial Loop^^AnnArbor^MI^99999^USA^B|9876543^Slide^Stan^S^^^^^NPPES&2.16.840.1.113883.19.4.6&ISO^L^^^NPI

Link to LOINC® lookup web site — http://search.loinc.org/
Link to MSDH LOINC® Codes Spreadsheet — MSDH LOINC Spreadsheet

SNOMED® Clinical Terminology (SCT): Standardized Result and Specimen Source Codes

SNOMED® CT provides the core general terminology for the electronic health record (EHR) and contains more than 311,000 active concepts with unique meanings and formal logic-based definitions organized into hierarchies. When implemented in software applications, SNOMED® CT can be used to represent clinically relevant information consistently, reliably and comprehensively as an integral part of producing electronic health records. ([1])

Result / Specimen Type	***Your facility's codes***	***SNOMED® CODE (SCT)***
Salmonella	SalSp	372342007
Stool Specimen Source	Stool	119339001

Translate / Map the facility's local codes to the SNOMED®, standardized result codes and specimen type codes.

SNOMED® "OBX 5.1" & "SPM 4.1" Example:

OBX|1|SN|625-4^Bacteria identified in Stool Culture^LN|1|372342007^Salmonella species (organism)^SCT|6|>^11.0|1^^UCUM^^^^1.6^^s/coratio|0.0-0.9|H~POS|||F|||200808151030-0700|||||200808181800-

SPM|1|225211376774000002013198000127450438201307170204 00^2013198000127&EHR&25D0651935&CLIA||119339001^Stool Specimen ^SCT^^^^20080131^^Stool|||||||||||||20130717014300|20130717020400

Link to SNOMED® Lookup Site	SNOMED® Codes Look-Up Site
MSDH SNOMED CT® Codes Spreadsheet	SNOMED CT
MSDH SNOMED® Qualifier Results Spreadsheet	SNOMED Qualifier Results
MSDH SNOMED® Specimen Spreadsheet	SNOMED Specimen Types

Live Data Testing

Hospital will send LIVE data to MSDH. MSDH program areas will validate content to ensure MSDH program requirements are met.

Send live patient data from the laboratory to MSDH by means of electronic lab reporting.

Here is the list of reportable disease and conditions for Mississippi to be sent electronically: http://msdh.ms.gov/msdhsite/_static/resources/877.pdf.

Class 1 diseases still require a phone call!

Parallel Testing

Before discontinuing manual reporting, MSDH will compare manual and ELR data for a period of time. Once ELR data is proven to be accurate, the hospital ELR interface will be certified and manual reporting for Class 2 and 3 diseases can stop. Class 1 diseases will still require a phone call.

Once Data Validation is completed and they have been given the OK to proceed, the on-boarding laboratory can begin submitting on-going reportable, production-level results to MSDH. The purpose of this step is to ensure that MSDH is receiving all of the laboratory reports that it would or should receive from the existing reporting methods as well as continued validation of messaging and vocabulary standards.

This reporting will be done in parallel with established reporting methods (i.e., fax, mail, and phone).

Production and Recertification

After initial certification, the hospital ELR interface will be in full PRODUCTION. LIS upgrades or after a specific period of time will require RECERTIFICATION.

On-going validation and corrections will be required after certification. MSDH will continue to monitor the certified ELR feed for timeliness and completeness on an on-going basis. However, it is the laboratory's responsibility to ensure that all reportable conditions are reported appropriately.

FAQ

How do I LOINC®?

Follow the instructions on the Vocabulary Worksheet. In short, you will find the standardized LOINC ®code that best represents your facility's local test codes. Your software vendor will also be able to answer any questions. For further assistance, use the LOINC® lookup table at www.loinc.org

How do I SNOMED®?

Follow the instructions on the Vocabulary Worksheet. In short, you will find the standardized SNOMED® code that best represents your facility's local result codes. Your software vendor will also be able to answer any questions. For further assistance, use the following SNOMED® lookup tables: IHTSDO, NPEx

How do I PHINVAD?

Follow the instructions on the Vocabulary Worksheet .In short, you will find the standardized PHINVAD codes for Sex, Race, County Code, and Ethnicity. Your software vendor will also be able to answer any questions.

Where can I find the required HL7 segments and fields?

The list of HL7 fields is on pages 7-11. It has a combination of all federal and state required HL7 fields and segments. This is the list that is used to validate whether or not a facility is ready to move into production.

Can a facility use HL7 version 2.3.1?

In order to qualify for Meaningful Use, version 2.5.1 is required. Only facilities who are not trying to qualify for Meaningful Use may use 2.3.1.

What diseases are reportable in Mississippi?

Mississippi State Department of Health: List of Reportable Diseases and Conditions

Who is required to report diseases and conditions to the state?

Mississippi is a dual reporting state. This means both the laboratory test requestor and laboratory test performer are responsible for reporting diseases and conditions to MSDH.

What are the steps to completing the ELR onboarding process?

Review the MSDH ELR Checklist for the steps to complete the onboarding process.

Where can I find the Rules and Regulations regarding state disease reporting?

Mississippi State Department of Health Rules and Regulations Governing Reportable Diseases and Conditions.

How does a facility/laboratory structure its ELRs if it is part of a health system network?

If the organization is using one interface to send ELR for multiple laboratories, then the performing laboratory's information must be captured in OBX23, 24 and 25 and the sending facility's information must be captured in MSH4.

What types of ELR messages does MSDH want to review?

A variety of reportable laboratory results from NM (numerical values), SN (numerical values that use greater than, less than, equal to, or ratios), and CE/CWE (coded result) formats. They should cover STD, Enteric, Vaccine preventable diseases, Blood Leads, and Tuberculosis disease and conditions. In addition, they should be as close to production level data as possible.

Can a facility send all laboratory reports or only reportable disease reports?

A facility can choose to do either. However, if a facility chooses to send all laboratory reports, then all results (both reportable and non-reportable) within the ELR must be fully mapped with both LOINC® and SNOMED® codes. If an HL7 message has both reportable and non-reportable results, then even the non-reportable test and results must be mapped with LOINC® and SNOMED® codes. MSDH is unable to move facilities into production if parts of their HL7 message are unmapped. For example, if a non-reportable test (a gram stain) or result (few organisms seen) are embedded in the same HL7 message as a reportable result, then even the non-reportable test and result have to be both LOINC® and SNOMED® mapped. Nothing can be left unmapped.

Do Reference Laboratory reports have to contain LOINC® and SNOMED® codes?

The sending facility is responsible for ensuring that the reference laboratory results that will be sent to MSDH contain LOINC®, SNOMED® and PHIN VADS codes within the ELRs.

Who is our State HIE?

-MS-HIN

Does a facility have to participate in MS-HIN in order to submit Meaningful Use-compliant public health data to MSDH?

Yes. MSDH and MS-HIN are working closely together to implement efficiencies in health information exchange throughout the state.

MSDH is requiring that all EHs, EPs, and CAHs use MS-HIN to satisfy their MU Public Health reporting.

What is the difference between a Leveraged Interface and an Independent Interface?

A leveraged interface means that there will be one interface that will send all reporting information to the state HIE, MS-HIN, which will then send it to MSDH.

An Independent interface means that there will be at least two interfaces. One interface will send information to MS-HIN, while, a separate independent interface will send information from the hospital, pass through MS-HIN, and directly to MSDH for consumption.

Once a facility is in full ELR production does it still need to call in Class 1 diseases?

Yes, the facility will still need to call Class 1 diseases to MSDH.
Reporting Hotline: 1-800-556-0003
Monday-Friday, 8:00am – 5:00pm

Class 1 Conditions may be reported nights, weekends, and holidays by calling: (601) 576-7400

What are the Direct Messaging ELR emails?

The facility must use their Direct Messaging account to send to the corresponding email addresses.

For attestation test messages: MSDH-ELR@ms-hin.medicity.net

For onboarding test messages: msdh.elr.onboard@msdh.mshindirect.org

What is parallel testing?

Parallel testing is one of the end stages in the ELR process. When the facility's HL7 message structure and quality are approved, the facility will send both ELRs and manual reports at the same time for a given period. During this time, the ELRs and manual reports will be cross-examined to see if the ELR feed is capturing all of the reportable diseases being sent from the facility. The facility will also need to provide a weekly case listing of what was reported to MSDH. The case listing needs to include: Last Name and First name, Disease, Birthdate or MRN, and report date.

If a field is marked as "Required but Empty" (RE), does the facility still have to put in the field pipes?

Yes, the field pipes must be present for all Required but Empty (RE) fields. The facility will have to be able to demonstrate that it could populate the field if the information was available. The facility is not required to report the information, only demonstrate the ability.

Why are some fields marked as Preferred (P) fields?

The Preferred fields would help the public health programs (Epidemiology, STD/HIV, Lead, and Tuberculosis) perform public health investigations. However, the facility is not required by federal or

state law to provide that information. It is helpful additional information for the State Health Department.

Does a facility have to use county PHINVAD codes in PID 11.9 if the patient is from outside of Mississippi?

Only Mississippi counties need to be PHINVAD coded; however, if the EHR is capable of sending the out-of-state county name, then this information would be helpful to receive.

Appendix

Look-Up Links

PHIN VADS Codes Look-up Web Site

LOINC® Codes Look-up Web Site

SNOMED® Codes Look-Up Site

Certified EHR Technology Vendor List

MSDH Reportable Diseases

MSDH Rules and Regulations Governing Reportable Diseases and Conditions

MSDH Master LOINC list Spreadsheet

MSDH SNOMED CT and RT Codes Spreadsheet

MSDH Master SNOMED Qualifier Results Spreadsheet

MSDH SNOMED Specimen Sources Spreadsheet

Helpful Links

CDC Introduction to Meaningful Use

CMS Stage 1 Requirements Overview

CMS Stage 2 Requirements Overview

CMS - Getting Started with EHR Incentive Program

PHIN Requirements Version 2.01

Acronyms and Definitions

AHIC	American Health Information Community	A federal group formed in 2005 to advise the Secretary of the Department of Health and Human Services on methods of increasing EHR adoption in healthcare facilities.
ARRA	American Recovery and Reinvestment Act	Commonly referred to as the Stimulus or The Recovery Act, was an economic stimulus package enacted by the 111th United States Congress in February 2009 and signed into law on February 17, 2009, by President Barack Obama.
CDC	Center for Disease Control	The national public health institute of the United States.
CMS	Centers for Medicare and Medicaid Services	Department within Department of Health and Human Services (DHHS) that administers the Medicare program and works in partnership with state governments to administer Medicaid,
Direct Email	Secure Messaging Service	A secure electronic exchange of patient information which allows health care providers a quick, secure, reliable access to patient health records.
ELR	Electronic Laboratory Reporting	ELR allows laboratories to report test results for reportable infectious diseases through an automated and secure process. ELR will replace paper-based reporting for most reportable infectious diseases
EHR/EMR	Electronic Health Records/Electronic Medical Record	Term used to describe both an individual's record and the software system used to present the information of the record.
HIE	Health Information Exchange	Provides the capability to electronically move clinical information among disparate health care information systems while maintaining the meaning of the information being exchanged.
HIPAA	Health Insurance and Portability and Accountability Act	Protects the privacy of individually identifiable health information.

HITECH	Health Information Technology for Economic and Clinical Health	Enacted to promote the adoption and meaningful use of health information technology.
HL7	Health Level 7	Standard Used for sending Medical Records securely across disparate systems.
LIMS	Laboratory Information Management System	A software-based laboratory and information management system.
LOINC®	Logical Observation Identifier Names and Codes	A universal code system for identifying laboratory and clinical observations.
MIIX	MS Immunization Information Exchange	Web-based, central repository for state-wide immunization records
MS-HIN	Mississippi - Health Information Network	A secure electronic exchange of patient information which allows health care providers a quick, secure, reliable access to patient health records. T
ONC	Office of the National Coordinator (for Health IT)	ONC is organizationally located within the Office of the Secretary for the U.S. Department of Health and Human Services (HHS).
ORU	Observational Report – Unsolicited	This is the type of HL7 message that has been designated for ELRs. There are many, many other types of HL7 messages.
PHIN	Public Health Information Network	Standards used by the CDC for using nation-wide interoperable information systems to support public health at the national, state, territorial, and local levels.
PHIN VADS	Public Health Information Network Vocabulary Access and Distribution System	PHIN VADS is a web-based enterprise vocabulary system for accessing, searching, and distributing vocabularies used in public health and clinical care practice.
SNOMED®	Systemized Nomenclature Of Medicine, Clinic Terms	Used to identify Lab test results and Specimen Sources

MISSISSIPPI STATE DEPARTMENT OF HEALTH

Electronic Laboratory Reporting Implementation Guide to On-Boarding

Version 4.0 - September 2014