North Dakota Electronic Lab Reporting (ELR)

Condensed Specification and Interoperability Steps

HL7 2.3.1 or 2.5.1

Document Purpose:

This guide is intended for:

1. Eligible Providers, Eligible Hospitals and Labs to use towards meeting the requirements for Meaningful Use Stage One and Two.
2. Providers that wish to begin reporting their reportable condition data to the state health department using the HL7 format.

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Interoperability Steps for Electronic Lab Reporting

1. Message Transport
    - The North Dakota Department of Health (NDDoH) is currently accepting direct SFTP connections. Currently high volume laboratories are prioritized with these connections.
    - Health Information Network Connectivity (HIN) – For those providers not able to connect direct via SFTP, the NDDoH will also be connected to the HIN. The HIN offers a wide variety of connection options available.

2. Analyze and validate your EHR/LIMS to ensure it is capturing all the required data that is to be sent
    - See the quality assurance criteria and the "Required Fields" table.

3. Message format – Validate that the message format conforms to the HL7 standard. The detailed 2.5.1 ELR specification can be found at www.hl7.org. If you are required to meet meaningful use, HL7 2.5.1 is required; otherwise NDDoH currently accepts 2.5.1, 2.3.1, 2.3, 2.3.z.

4. Content validation – Content validation will need to occur with your facility and the NDDoH messaging staff.
    - Identify Key Resources
    - Review Roles and Responsibilities
    - Discuss Required Field Mapping
    - Review Testing Process
    - Verify Defined Fields

5. Testing – Being able to utilize production data for testing is best practice and a lesson learned from previous connections.

6. Go-Live – Prior to go-live, the provider site must complete the HL7 Responsibilities and Contact Information Form and send to the NDDoH Messaging staff. This form identifies which of your staff will monitor the data feed and correct errors. NDDoH staff uses information from this form to coordinate reporting changes and coordinate training sessions.

Quality Assurance Criteria

Listed below in the numbered blue headings are a few fields that need additional attention during your GAP analysis in order to ensure the fields are available and completed correctly. In addition, the complete list of required fields is also provided below.

1. Specimen Source

Specimen source is required for all reportable conditions. The specimen source in 2.5.1 is in the SPM segment, in 2.31 it is contained in the OBR segment field 15. Specimen source should be coded, if it's unable to be coded the NDDoH will need a listing of the text fields sent so they can be mapped on the receiving side.

2. Observation Result (OBX) Segment

This segment contains the result of the ordered test; the OBX 3 needs to be a LOINC coded. The NDDoH may be able to provide technical assistance (TA) through the CDC to map your local test catalogue. For laboratory-based reporting, SNOMED coding is strongly recommended for OBX-5 whenever the CE data type is indicated in OBX-2

3. Patient Address

PID-11 is the patient address and is required for reporting as public health utilizing this information for any patient follow-up that might be necessary.

Required Fields

Required fields for an acceptable ELR message are located below. A full listing of all required, preferred, and optional fields can be found here.

HL7 Element Name	HL7 Segment	Required
MSH – Message Segment Header		
Field Separator	MSH-1	Required
Encoding Characters	MSH-2	Required
Sending Application	MSH-3	Required
Namespace ID	MSH-3.1	Required
Universal ID	MSH-3.2	Required
Universal ID Type	MSH-3.3	Required
Sending Facility *(i.e |lab name^CLIA code|CLIA)*	MSH-4	Required
Receiving Application	MSH-5	Required
Receiving Facility	MSH-6	Required
Date Time of Message	MSH-7	Required
Message Type	MSH-9	Required
Message Control ID	MSH-10	Required
Processing ID	MSH-11	Required
Version ID	MSH-12	Required
PID – *PATIENT IDENTIFICATION SEGMENT*		
Set ID	PID-1	Required
Patient Name	PID-5	Required

Date Time Of Birth	PID-7	Required
Administrative Sex	PID-8	Required
Race	PID-10	Required
Patient Address	PID-11	Required
Home Phone Number	PID-13	Required
ORC – *ORDER COMMON SEGMENT*		
Ordering Facility Name	ORC-21	Required
Ordering Facility Address	ORC-22	Required
Ordering Provider Address	ORC-24	Required
OBR – *OBSERVATION REQUEST SEGMENT*		
Filler Order Number	OBR-3	Required
Universal Service Identifier	OBR-4	Required
Observation Date Time	OBR-7	Required
Specimen Source	OBR-15	Required
Ordering Provider	OBR-16	Required
Result Status	OBR-25	Required
OBX – *OBSERVATION RESULT SEGMENT*		
Set ID	OBX-1	Required
Value Type	OBX-2	Required
Observation Identifier	OBX-3	Required
Observation Sub ID	OBX-4	Required
Observation Value	OBX-5	Required
Observation Result Status	OBX-11	Required
Date Time Of The Observation	OBX-14	Required
Producers Reference	OBX-15	Required
SPM – *SPECIMEN SEGMENT (2.5.1)*		
Set ID	SPM-1	Required (2.5.1)
Specimen ID	SPM-2	Required (2.5.1)
Specimen Type	SPM-4	Required (2.5.1)
Specimen Collection Method	SPM-7	Required (2.5.1)
Specimen Source Site	SPM-8	Required (2.5.1)
Specimen Description	SPM-14	Required (2.5.1)
specimen collection date/time	SPM-17	Required (2.5.1)
specimen received date/time	SPM-18	Required (2.5.1)
NTE – *NOTES AND COMMENTS SEGMENT*		
Set ID	NTE-1	Required if Available
Source of Comment	NTE-2	Required if Available
Comment	NTE-3	Required if Available
Comment Type	NTE-4	Required if Available