

North Dakota Department of Health Syndromic Surveillance Condensed Specification Guide

ADT Messages A01, A03, A04 & A08

HL7 Version 2.5.1

(Version 2.3.1 Compatible)

Version 1.2

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How to use this guide

This guide is intended for the use of providers and hospitals or their vendors to use toward meeting the requirements for meeting Meaningful Use (MU) stages one, two, and three for Syndromic Surveillance (SS). It is not meant to be an exhaustive resource regarding SS MU requirements. Rather, the information provided here is intended as a quick reference for users with an existing understanding of HL7 messaging format and how SS relates to MU. A more comprehensive messaging guide for syndromic surveillance is also available from the North Dakota Department of Health (NDDoH), and can be found at:

http://www.ndhealth.gov/disease/SS/Docs/NDImplementationGuide_v2.pdf

Fulfillment of MU SS requirements requires conformance to the national messaging standard. The most recent version of this standard can be found at:

http://www.cdc.gov/phinf/library/guides/PHIN%20MSG%20Guide%20for%20SS%20Final_508readyRelease1_9%2004%2027%202013.pdf

Establishing a Connection for Syndromic Reporting

Facilities that wish to connect to the NDDoH for the purpose of sending syndromic messages must first register their intent to do so. The online MU Registration of Intent form can be found at <http://www.ndhealth.gov/disease/mu/MU.aspx>. NDDoH will contact registrants after receiving this registration of intent form. Facilities will follow this process when establishing a connection with NDDoH:

1. Determine how messages will be transported—Facilities can connect to NDDoH in one of two ways:
 - Direct Secure File Transfer Protocol (SFTP) connection.
 - Connection through the North Dakota Health Information Network (HIN). The HIN offers a wide variety of connection options; providers who are not set up to connect via SFTP may be able to connect to the NDDoH via the HIN.
2. Create messages in the proper format: Messages must conform to the HL7 standard, version 2.5.1 (preferred) or 2.3.1 (acceptable). The NDDoH accepts four types of messages:
 - A01—Admit/visit notification

- A03—Discharge/end visit
 - A04—Registration of patient
 - A08—Update patient information
3. Analyze messages internally to verify all required data has been captured (see Required Fields). If a facility has not yet completed the Registration of Intent, it must do so now.
 4. Send a test message to the NDDoH for validation (completion through this step may fulfill MU stage one requirements for SS) and prepare for the testing phase. The NDDoH will provide feedback based on requirements for MU stage 2, and will work with your facility to prepare for sending complete and valid syndromic messages.
 5. Send production level test messages to the NDDoH through a direct connection or through the HIN.
 6. Go-live: After the NDDoH determines messages received via testing will be successful, a continued connection will be established. The continued submission of complete and valid syndromic messages is required for the fulfillment of MU stage 2 SS objectives.

Required Fields

Required fields are designated at the national and state level. In order to meet Stage 2 requirements for MU in North Dakota, these fields must be filled. This guide is generally applicable to both facility and ambulatory providers. NDDoH understands information from ambulatory providers will be different in some respects, and questions from ambulatory providers related to these fields will be addressed during the onboarding process. Additional fields that are optional may also be sent. To view optional fields, or for additional information on the values listed here, please see the [full version](#) of North Dakota’s SS Messaging Guide.

Quality Assurance:

In order to ensure the utility of the syndromic messages NDDoH receives, providers and their vendors are asked to pay special attention to the following fields when reviewing. Our SS system, BioSense 2.0, will not accept messages with errors in these fields.

1. **Diagnosis Code (DG1-3):** A numeric ICD diagnosis code (DG1-3.1) is the preferred source

for creation of a syndrome by BioSense 2.0, and is therefore the most important field for the purpose of SS. The DG1-3.1 field is the only field from which BioSense 2.0 can read a numeric diagnosis code. If this information is not contained within the DG1-3.1 segment, a diagnosis text can also be read from DG1-3.2 and from other places in a message (chief complaint, admitting diagnosis) for the generation of a syndrome. However, transmission of a numeric code is preferred as soon as possible for the sake of quality and consistency.

2. **Patient ID (PID-3):** This field designates a unique identifier for the patient, and is important in calculating threshold data. As a single person can be seen by one or more providers one or more times for a single illness, a unique patient ID is crucial for creating accurate syndrome counts. Social security numbers or medical record numbers should not be used to populate this field.

Required Fields Table:

The following fields are required in syndromic messages sent in North Dakota. Requirements for National certification may be different: fields not used for NDDoH SS have been removed, and fields specific to NDDoH have been added (and denoted*). Additional optional fields may also be sent. Multiple timely messages may be sent to fulfill the complete set of requirements for one visit as long as the unique visit ID (PV1-19.1) is identified in each message.

| HL7 Element Name | HL7 Segment | Requirement |
|---|-------------|---------------------------------------|
| <i>MSH—Message Segment Header (Required)</i> | | |
| Field Separator | MSH-1 | Required |
| Encoding Characters | MSH-2 | Required |
| NameSpace ID (sending facility) | MSH-4.1 | Required if available |
| Universal ID | MSH-4.2 | Required |
| Universal ID Type | MSH-4.3 | Required |
| Receiving Facility | MSH-6 | Required*(provided during onboarding) |
| Date/Time of Message | MSH-7 | Required |
| Message Code | MSH-9.1 | Required |
| Trigger Event | MSH-9.2 | Required |
| Message Structure | MSH-9.3 | Required |
| Message Control ID | MSH-10 | Required |
| Processing ID | MSH-11 | Required |
| Version ID | MSH-12 | Required |
| <i>EVN—Event Type Segment (Required)</i> | | |
| Recorded Date/Time | EVN-2 | Required |

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| Universal ID (event facility) | EVN-7.2 | Required |
| Universal ID Type | EVN-7.3 | Required |
| <i>PID—Patient Identification Segment (Required)</i> | | |
| Set ID for PID Segment | PID-1 | Required |
| Patient ID Number | PID-3.1 | Required |
| Date of Birth | PID-7 | Required* |
| Administrative Sex | PID-8 | Required* |
| Race Identifier | PID-10.1 | Required if available |
| Race Text | PID-10.2 | Required if available |
| State or Province | PID-11.4 | Required if available* |
| Zip or Postal Code | PID-11.5 | Required if available |
| Ethnic Group Identifier | PID-22.1 | Required if available |
| Patient Death Date/Time | PID-29 | Required if PID-30 filled (A08 and A03 message types only) |
| Patient Death Indicator | PID-30 | Required if patient has died (A08 and A03 message types only) |
| <i>PV1—Patient Visit Segment (Required)</i> | | |
| Set ID for PV1 Segment | PV1-1 | Required if applicable |
| Patient Class | PV1-2 | Required |
| Admission Type | PV1-4 | Required if available* |
| Admit Source | PV1-14 | Required if available* |
| Ambulatory Status | PV1-15 | Required if available* |
| Patient Visit ID Number | PV1-19.1 | Required |
| Visit Number Identifier Type Code | PV1-19.5 | Required |
| Discharge Disposition | PV1-36 | Required if available (A08 and A03 message types only) |
| Admit Date/Time | PV1-44 | Required |
| Discharge Date/Time | PV1-45 | Required if available (A08 and A03 message types only) |
| <i>PV2—Patient Visit Additional Information Segment (Required for inpatient visits if no diagnosis is given in DG1 segment)</i> | | |
| Admit Reason Identifier | PV2-3.1 | Required if available |
| Admit Reason Text | PV2-3.2 | Required if available |
| Admit Reason Name of Coding System | PV2-3.3 | Required if PV2-3.1 is filled |
| <i>OBX—Observations/Results Segment (Required if available)</i> | | |
| The following values are required by NNDoh to be present within the OBX segments when available: Chief Complaint, Patient Age, Patient Temperature (First Encounter), Patient Pulse Oximetry, Patient Initial Blood Pressure, Patient Weight, Patient Height, Patient Illness/Injury Onset Date, Triage Notes, Pregnancy Status. Other fields may be filled as appropriate to convey the information needed for each data type. | | |
| Set ID for OBX Segment | OBX-1 | Required applicable |
| Value Type | OBX-2 | Required |

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|---|---------|-----------------------------------|
| Observation Identifier (NM, CWE, TX, TS, SN, etc.) | OBX-3.1 | Required |
| Name of Coding System | OBX-3.3 | Required if OBX-3.1 is filled |
| Observation Value | OBX-5.1 | Required |
| Original Text for CWE Observation Value | OBX-5.9 | Required for CWE data type |
| Identification code for observation value unit type | OBX-6.1 | Required if OBX-5.1 NM value type |
| Name of coding system for observation value unit type | OBX-6.3 | Required if OBX-5.1 NM value type |
| Observation Results Status | OBX-11 | required |
| <i>DG1—Diagnosis Segment (Required if available)</i> | | |
| Set ID for DG1 Segment | DG1-1 | Required |
| Diagnosis Code Identifier | DG1-3.1 | Required |
| Diagnosis Code Text | DG1-3.2 | Required |
| Diagnosis Type | DG1-6 | Required |
| <i>PR1-Procedures Segment (Required if available*)</i> | | |
| Set ID for PR1 Segment | PR1-1 | Required |
| Procedure Code Identifier | PR1-3.1 | Required if available |
| Procedure Code Text | PR1-3.2 | Required if available |
| Name of Coding System | PR1-3.3 | Required if PR1-3.1 is filled |
| Procedure Date/Time | PR1-5 | Required |

Contact Information

If you have any questions, please contact the NDDoH Division of Disease control at 701-328-2378. Information on SS and other MU messaging requirements can be found at <http://www.ndhealth.gov/disease/mu/>.

If you are interesting in contacting the North Dakota Health Information Network (NDHIN), please call 701-328-1983 or visit www.ndhin.org.