



SYNDROMIC DATA ELEMENT PRIORITIZATION

The National Syndromic Surveillance Program (NSSP), in collaboration with the syndromic surveillance community, has assigned *priority levels* to data elements within syndromic HL7 messages. Data elements are described in detail in the [PHIN Messaging Guide for Syndromic Surveillance 2.0](#). Processing details for each element can be found in the [NSSP Data Dictionary](#). Priority levels help guarantee data quality in the production environment and are used when onboarding new facilities or re-onboarding existing facilities. Priority levels are included in the NSSP [New Site Onboarding](#) and [New Facility Onboarding](#) guides.

Priority 1 data elements are the *minimum required* to perform surveillance activities. Shown below are the required fields for maintaining a minimum level of completeness and validity so that a facility can achieve and maintain production status.

Priority 1 Data Elements			
Processed Column	Priority	Required	HL7
Admit_Date_Time	1	R	PV1-44.1
Admit_Reason_Description	1	RE	PV2-3.2, PV2-3
C_Chief_Complaint	1	CRE	OBX or PV2-3
C_Death	1	CRE	PID.30.1
C_Facility_ID	1	CR	EVN-7.2, MSH-4.2 or MSH-4.1
C_FacType_Patient_Class	1	CR	OBX-2,3,5
C_Patient_Age	1	CRE	OBX-2,3,5
C_Patient_Age_Years	1	CRE	OBX-2,3,5
C_Patient_Class	1	CR	PV1.2.1 or calculate
C_Unique_Patient_ID	1	CR	PID.3.1
Chief_Complaint_Text	1	RE	OBX-2,3,5
Diagnosis_Code	1	RE	DG1-3.1, DG1-3.4
Diagnosis_Description	1	RE	DG1-3.2, DG1-3.5
Facility_Type_Code	1	R	OBX-2,3,5
Patient_Class_Code	1	R	PV1.2.1
Patient_Zip	1	RE	PID.11.5
Processing_ID	1	R	MSH.11.1
Sending_Facility_ID	1	R	MSH-4.2 or MSH-4.1
Treating_Facility_ID	1	R	EVN.7.2
Trigger_Event	1	R	MSH.9.2
Visit_ID	1	R	PV1.19.1



Priority 2 data elements are also useful for surveillance activities and may be required by sites before a facility can move to production. NSSP requires these data elements meet minimum standards of completeness and validity within 12 months of a facility achieving production status.

Priority 2 Data Elements			
Processed Column	Priority	Required	HL7
First_Patient_ID	2	R	PID-3.1
Medical_Record_Number	2	R	PID.3.1
Sending_Facility_ID_Source	2	R	MSH-4.1
Message_Date_Time	2	R	MSH.7.1
Recorded_Date_Time	2	R	EVN.2.1
Discharge_Disposition	2	RE	PV1.36.1
Discharge_Date_Time	2	RE	PV1.45.1
Administrative_Sex	2	RE	PID.8.1
Age_Reported	2	RE	OBX.5.1
Age_Units_Reported	2	RE	OBX.6.2
C_Patient_Age_Units	2	C	OBX.6.2
Race_Code	2	RE	PID-10.1
Ethnicity_Code	2	RE	PID-22.1
Ethnicity_Description	2	RE	PID-22.2
Patient_City	2	RE	PID.11.3
Patient_State	2	RE	PID.11.4
C_Patient_County	2	CRE	PID-11.9
Patient_Country	2	RE	PID.11.6
Admit_Reason_Code	2	RE	PV2-3.1, PV2-3
Chief_Complaint_Code	2	RE	OBX-2,3,5
Diagnosis_Type	2	RE	DG1.6.1
Version_ID	2	R	MSH.12.1

Priority 3 data elements are mostly Optional data elements; still useful for surveillance activities, but not required by most sites. Currently, the NSSP does not require that these fields be populated in incoming data.

Priority 3 Data Elements			
Processed Column	Priority	Required	HL7
First_Patient_ID_Type_Code	3	O	PID-3.5
First_Patient_ID_Assigning_Authority	3	O	PID-3.4
First_Patient_ID_Assigning_Facility	3	O	PID-3.6
Medical_Record_Number_Assigning_Authority	3	O	PID.3.1
Medical_Record_Number_Assigning_Facility	3	O	PID.3.1
Visit_ID_Assigning_Authority	3	O	PV1.19.4
Visit_ID_Assigning_Facility	3	O	PV1.19.6
Patient_Account_Number	3	O	PID.18.1
Alternate_Visit_ID	3	O	PV1.50
Facility_Type_Description	3	O	OBX-2,3,5
Receiving_Facility	3	O	MSH.6.1

Priority 3 Data Elements

Processed Column	Priority	Required	HL7
Diagnosis_Date_Time	3	O	DG1.5.1
Procedure_Date_Time	3	O	PR1.5
Observation_Date_Time	3	O	OBX.14.1
Onset_Date	3	O	OBX.5.1
Patient_Death_Indicator	3	O	PID.30.1
Death_Date_Time	3	O	PID.29.1
Admission_Type	3	O	PV1.4
Admit_Source	3	O	PV1.14
Ambulatory_Status	3	O	PV1.15
Hospital_Service	3	O	PV1.10
Insurance_Company_ID	3	O	IN1-3
Insurance_Coverage	3	O	IN1-15
Previous_Hospital_Unit	3	O	PV1-6
Provider_Type_Code	3	O	OBX-2,3,5
Provider_Type_Combo	3	O	OBX-2,3,5
Provider_Type_Description	3	O	OBX-2,3,5
Unique_Physician_Identifier	3	O	PV1-7.1
Unique_Physician_Identifier_Assigning_Authority	3	O	PV1-7.9
Hospital_Unit_Code	3	O	OBX-2,3,5
Hospital_Unit_Description	3	O	OBX-2,3,5
Age_Calculated	3	RE	OBX.5.1
Age_Units_Calculated	3	RE	OBX.6.2
Birth_Date_Time	3	O	PID.7.1
Race_Description	3	O	PID-10.2
Triage_Notes	3	O	OBX.5.1
Diagnosis_Priority	3	O	DG1.15
Event_Type_Code	3	O	EVN.1.1
Procedure_Code	3	O	PR1.3.3
Procedure_Description	3	O	PR1.3.2
Clinical_Impression	3	O	OBX-2,3,5
Initial_Acuity_Code	3	O	OBX.5.1
Initial_Acuity_Description	3	O	OBX.5.1
Initial_Evaluation_Note	3	O	OBX-2,3,5
Medication_Code	3	O	OBX.5.1
Medication_Description	3	O	OBX.5.1
Medication_List	3	O	OBX.5.1
Problem_List_Code	3	O	OBX.5.1
Problem_List_Description	3	O	OBX.5.1
Travel_History	3	O	OBX-2,3,5

Priority 3 Data Elements			
Processed Column	Priority	Required	HL7
Initial_Temp	3	O	OBX-5
Initial_Temp_Units	3	O	OBX-6
Initial_Pulse_Oximetry	3	O	OBX-5
Initial_Pulse_Oximetry_Units	3	O	OBX-6
Diastolic_Blood_Pressure	3	O	OBX-5
Diastolic_Blood_Pressure_Units	3	O	OBX-6
Str_Diastolic_Blood_Pressure	3	O	OBX-5
Systolic_Diastolic_Blood_Pressure	3	O	OBX-5
Systolic_Diastolic_Blood_Pressure_Units	3	O	OBX-6
Systolic_Blood_Pressure	3	O	OBX-5
Systolic_Blood_Pressure_Units	3	O	OBX-6
Pregnancy_Status_Code	3	O	OBX-2,3,5
Pregnancy_Status_Description	3	O	OBX-2,3,5
Smoking_Status_Code	3	RE	OBX-2,3,5
Smoking_Status_Description	3	RE	OBX-2,3,5
Body_Mass_Index	3	O	OBX-5
Height	3	RE	OBX-5
Height_Units	3	RE	OBX-6
Weight	3	RE	OBX-5
Weight_Units	3	RE	OBX-6
Assigned_Patient_Location	3	O	PV1-3
Time_Zone	3	O	MSH-7.1

RESOURCES

PHIN Messaging Guide for Syndromic Surveillance 2.0

https://www.cdc.gov/nssp/documents/guides/syndrsurvmessagguide2_messagingguide_phn.pdf

NSSP Data Dictionary

<https://www.cdc.gov/nssp/biosense/docs/NSSP-Data-Dictionary-508.xlsx>

NSSP New Site Onboarding Guide for the BioSense Platform

<https://www.cdc.gov/nssp/biosense/onboarding-guide/pdf/New-Site-OG-508.pdf>

NSSP New Facility Onboarding Guide for the BioSense Platform

<https://www.cdc.gov/nssp/biosense/onboarding-guide/pdf/New-Facility-OG-508.pdf>

FOR MORE INFORMATION

Visit the NSSP website, Onboarding, at <https://www.cdc.gov/nssp/biosense/onboarding.html>.